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To one and all we extend our sincerest good  
wishes for a Merry Christmas, and a Happy and  
Prosperous New Year.

### AMERICAN EXPOSITION IN BERLIN.

That America is to have a comprehensive and repre-  
sentative exposition in Berlin in 1910 is assured. Manu-  
facturers and business men throughout the country are  
displaying a lively interest in the undertaking, and applica-  
tions for space have been received by the American Com-  
mittee from many States. The indications are that every  
branch of American progress will be shown at the expo-  
sition.

It is but natural that the United States should seek to  
hold an all-American exposition in Europe, for our export  
trade in that direction has reached splendid proportions  
and it is constantly increasing. Our exports to Europe for  
the year 1908 reached the enormous sum of \$1,270,016,773.  
It is also easily seen why the projectors of the exposition  
selected Germany as the country in which to hold it, for  
that country alone receives \$274,178,712 of our export  
trade, nearly one-fourth of the total amount going to  
Europe. It can be truly said of Berlin that that city is the  
commercial heart of Europe.

In view of the fact that our export trade to Europe in  
chemicals, drugs, dyes and other materials of this nature  
amounted to more than \$5,000,000 in 1908, it would seem  
to be to the interest of American houses to be represented  
at the exposition by an exhaustive display showing our  
resources in this line. American dealers sold patent medi-  
cines to the amount of \$2,455,335 in Europe in 1908, and  
our export trade in acetate of lime to Europe amounted to  
\$1,515,935 the same year. We also did a large business  
with Europe in dyes and dye stuffs.

Impetus has been given the Exposition enterprise by  
the recent appointment of Former Governor David R.  
Francis, of Missouri, to the office of first Vice-President

of the American Committee. Mr. Francis was President of the St. Louis World's Fair in 1904 and the success of that great exposition was largely due to his wise management and active interest.

There has just been issued by the American Committee, whose offices are at No. 50 Church street, New York, an attractively arranged prospectus of the Exposition, which, in addition to outlining the objects and advantages of the enterprise, contains many photographic views of the Exposition palace and portraits of the distinguished sponsors of the undertaking.

There will be no customs duty and exhibits will be entitled to a material ocean freight reduction both ways.

#### PURE FOOD MATTERS.

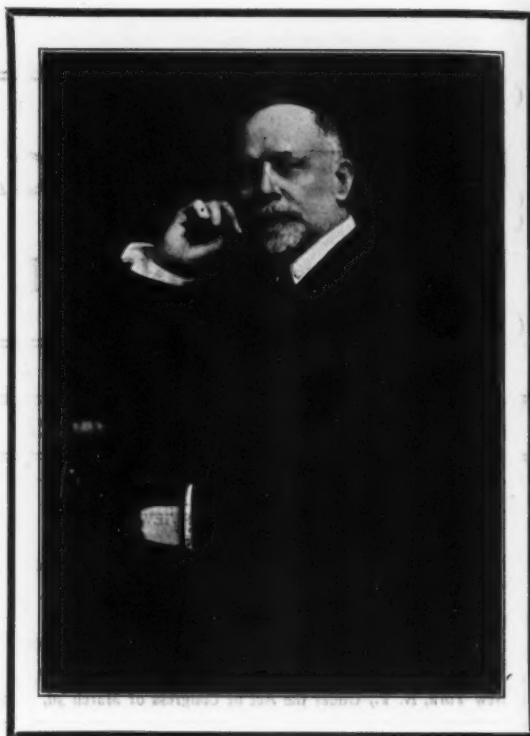
We have received a copy of the Annual Report of the Secretary of Agriculture for 1909. Those sections of principal interest to this industry relate to enforcing the pure food law. The Secretary reports that while the manufacturers and jobbers have shown great disposition to comply with the Department's rulings, and the Department has endeavored to act without harshness, some flagrant violations of the law have occurred and prosecution of the violators has been vigorous. The Department Solicitor has prepared and reported to the Attorney-General for prosecution 494 cases, and of those tried but two were lost. Convictions and fines aggregating over \$2,000 were secured in 85 cases; and in 98 cases decrees of condemnation and forfeiture were issued covering many tons of food and drugs. As a result of these operations, misbranded and adulterated products are rapidly disappearing from interstate commerce.

On other pages of this issue we report the results of three prosecutions brought recently by the U. S. Government against makers of flavoring extracts. This is the first report of these cases in any but local newspapers; where no technical facts were given, and we trust the report will be closely read. In the case against the Nave-McCord Mercantile Co. a number of novel points are raised, which will be threshed out on the appeal which will be heard Jan. 7, 1910.

We continue the publication of the Government's Bulletin on Lemon Oil, and will shortly publish comments by Mr. Ernest J. Parry, and a reply thereto by Dr. Harvey W. Wiley.

The reports of alleged violations in the various States should also receive careful attention, for that happy time when there shall have been some uniformity established has not yet arrived.

Concerning orange oil we can only say that our position was fully endorsed by the Treasury Department in Washington, when we took up the matter in person, but as protests had been precipitately filed by importers, with the Board of General Appraisers, the question of duty will have to remain in *statu quo* until a decision is reached by that board.



Mahlon N. Kline died suddenly of heart failure on Saturday evening, Nov. 27, while attending a meeting of the Brotherhood of St. Andrew at the Church of the Saviour, Philadelphia.

Mr. Kline was born Feb. 6, 1846, near Hamburg, Pa. Equipped with only a public school education he went to Philadelphia at the age of 19 years and entered the employ of Smith & Shoemaker, wholesale druggists. His merit was so quickly recognized that three years later he was admitted to partnership. In 1869 Mr. Shoemaker retired and the firm name was changed to Smith, Kline & Co. In 1891 Mr. Henry B. French, of the old firm of French, Richards & Co., joined the Smith & Kline Co., as vice-president, the name being then changed to Smith, Kline & French Co.

Mr. Kline was very earnest and active in all movements tending to the betterment of trade conditions and was instrumental in securing the passage of the law permitting the use of denatured alcohol, of that providing a drawback on medicine and toilet preparations containing alcohol.

At a special meeting of the Board of Directors, held Dec. 4, the following resolutions were adopted:

"Whereas, The Board of Directors of the Smith, Kline & French Company, in special meeting assembled, feeling deep affliction through the sudden summoning to eternal life of our beloved president and friend, but believing, through our sorrow, that the Great Master, whom he so loyally followed, has called him to a commensurate reward, even as he would have wished it to be; and being

still mindful, in our personal grief, that loved ones remain to whom we can extend the hand of sympathy, helpless though we be to ease their suffering, we do place upon our records this memorial minute.

"We do not attempt to here record the achievements of that full life. It is unnecessary. We would rather say, '*Si monumentum requiris, circum spice*,' for, in his far-reaching influence in the business world, in the impression he has made upon civil and religious life of his country, and, most of all, deeply embedded in the hearts of all who have known him, we may behold moments that cannot be effaced.

"*Be it Resolved, therefore*, That, on behalf of all in interest in this company, we record the deep personal loss which we feel through the sudden death, on the twenty-seventh day of November, one thousand nine hundred and nine, of our president, Mahlon N. Kline, and of our appreciation of the help his life has been to us; and

"*Be it further Resolved*, That we do extend to those whose loss is greater than ours, in their grief for husband and father, our deep sympathy, and ask that they believe with us that even the depths of their sorrow contain the assurance that a life was well lived, and the promise that, for him, death will have no sting."

Mr. Kline is survived by a widow, two daughters and one son.

Alfred Charles Wooten, editor of *The Chemist and Druggist*, London, died at his home in that city on Nov. 24, at the age of 64.

John Hall, for more than a quarter of a century proprietor of the inn on Storm King Mountain, near Cornwall-on-the-Hudson, died at the home of his son, Dr. James S. K. Hall, 338 West 54th street, New York, on Dec. 12, at the age of 63 years. He is survived by a widow, one daughter and four sons. Among the latter is Mr. George Hall, president of the United Perfume Co., Boston, Mass.

Mr. Charles Thomas, formerly a director of Christopher Thomas Brothers, Ltd., soapmakers, in Bristol, Eng., died recently.

William Wrigley, founder of the Wrigley Mfg. Co., soap manufacturers, in Philadelphia, died recently of pneumonia.

### TREASURY DECISIONS.

(T. D. 30113.)

#### Toilet Soap.

TREASURY DEPARTMENT, November 17, 1909.

SIR: The Department duly received your letter of the 8th instant relative to the classification of Pears' unscented soap.

The proper classification of this merchandise has been before the department for some time, and, after a careful consideration of the question, it is of the opinion that it is properly dutiable as a fancy toilet soap at the rate of 50 per cent. ad valorem under paragraph 69 of the tariff act of August 5, 1900.

You will be governed accordingly.

Respectfully,  
(68384.)

CHARLES D. NORTON,  
Acting Secretary.

COLLECTOR OF CUSTOMS, New York.

(T. D. 30190.)

#### Refined Cocoanut Oil.

FUERST v. UNITED STATES.

U. S. Circuit Court of Appeals, Second Circuit. December 7, 1909. No. 84 (suit 4168).

1. REFINED COCOANUT OIL.—The provision in paragraph 626, tariff act of 1897, for "cocoanut oil" includes refined as well as unrefined oil.
2. SAME—COCOA BUTTERINE.—Refined cocoanut oil is not "cocoa butterine" within the meaning of paragraph 282, tariff act of 1897.
3. SPECIFIC DESIGNATION.—"Cocoanut oil" in paragraph 626, tariff act of 1897, is a more specific designation than "cocoa butterine" in paragraph 282.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The report of the decision below (166 Fed. Rep., 1014; T. D. 29394) contains a copy of the decision of the Board (Abstract 9541; T. D. 26958), which affirmed the assessment of duty by the collector of customs at the port of New York on importations by Fuerst Brothers & Co.

*Comstock & Washburn* (J. Stuart Tompkins of counsel), for the importers.

*D. Frank Lloyd*, Deputy Assistant Attorney-General (*William A. Robertson*, special attorney, of counsel), for the United States.

Before LACOMBE, COXE, and NOYES, Circuit Judges.

Appeal from a decision of the Circuit Court, Southern District of New York, in a customs case. The importation in question is refined cocoanut oil. The importers in their protest claimed that it was entitled to free entry as "cocoanut oil" under paragraph 626 of the tariff act of 1897. The collector assessed it for duty under paragraph 282 of said act, which reads as follows:

Cocoa butter or cocoa butterine, three and one-half cents per pound.

The Board of General Appraisers affirmed the action of the collector and the Circuit Court affirmed the Board.

The importers appeal.

NOYES, *Circuit Judge* (after making the foregoing statement): The term "cocoanut oil" in the free list is broad enough to include refined as well as unrefined oil. The merchandise in question is refined cocoanut oil, and consequently it is entitled to free entry unless it is more specifically provided for elsewhere.

The Circuit Court and the Board of Appraisers apparently held that the merchandise was properly assessed for duty as "cocoa butterine" because the importers had failed to show that it was not suitable for use as a substitute for cocoa butter.

We are by no means certain that the importers, having shown that the provision of the free list applied to this article, were obliged to go further and offer evidence to negative the application of the cocoa-butterine paragraph. Refined and unrefined cocoanut oil might both be used as substitutes for cocoa butter without making "cocoa butterine" a more specific designation for them than "cocoanut oil."

But, assuming that the burden was upon the importers to show the non-application of the "cocoa butterine" paragraph, we think they sustained it. We are fully satisfied from the evidence that refined cocoanut oil is not cocoa butterine, and that if it could be used as a substitute for cocoa butter, still it is more specifically described in the provision of the free list than in paragraph 282.

The case of *United States v. Oriental American Co.* (129 Fed. Rep., 249; T. D. 25179) is directly in point and is approved.

The decision of the Circuit Court is reversed.

# THE OCCURRENCE OF PINENE IN LEMON OIL\*

By E. M. CHACE

## EXPLANATION OF TABLES.

Table I contains the analyses of oils adjudged by the Bureau to be adulterated which were imported between May 17 and July 26, 1907. Aside from the presence of considerable quantities of pinene, the oils are abnormal in other respects.

Table II contains the analyses of oils imported between July 30 and November 17, 1907. They were adjudged to be adulterated chiefly because of the presence of pinene, although, as is noted under "Remarks" in this table, many of the oils are abnormal in other respects.

Table VI contains analyses of oils collected in the same manner in the Etna district, in which is situated the Mascali region. The oils from this region were reported by the Italian expert as highly abnormal.

Table VII contains analyses of oils collected in the same manner in the Messina district. The oils collected at Bauso on the north coast are included here, although their composition is more nearly like that of Barcelona and Patti oils.

Table VIII contains analyses of oils collected in the same manner in the Palermo district. Both distilled oil and

TABLE I.—Analyses of oils adjudged adulterated.

(Imported between May 17 and July 26, 1907.)

New York port No.	Date received	Specific gravity at 15.6/15.6	Rotation of oil at 25° C.	Rotation of 10 per cent distillate	Difference	Refractive index of oil at 20° C.	Citral	Pinene test	Remarks
7550	May 17, 1907	0.8610	59.4	56.6	2.8	1.4722	3.1	Very strongly positive	Refractive index also below normal.
7581	May 29, 1907	.8614	59.6	56.6	3.0	1.4728	3.5	Do.	Do.
7538	June 15, 1907	.8601	58.6	55.3	3.3	1.4729	3.6	Do.	Do.
7542	June 18, 1907	.8604	58.1	55.3	2.8	1.4723	4.1	Do.	Do.
7540	June 19, 1907	.8591	58.5	56.5	2.0	1.4734	4.7	Do.	Do.
7539	do	.8600	58.6	56.2	2.4	1.4736	4.7	Do.	Do.
7941	June 22, 1907	.8596	58.4	56.4	2.0	1.4735	4.7	Do.	Do.
8194	July 9, 1907	.8613	58.6	55.8	2.8	1.4738	4.6	Do.	Grossly adulterated with turpentine.
8152	do	.8594	58.1	53.3	4.8	1.4740	4.5	Do.	Refractive index also below normal.
8153	July 15, 1907	.8605	59.2	56.8	2.4	1.4732	7.1	Do.	Do.
8311	July 26, 1907	.8594	59.2	56.3	2.9	1.4740	do	Do.	Do.
Average		.8602	58.8	52.6	4.4	1.4734	4.0		

\*Omitted from average

TABLE II.—Analyses of oils adjudged adulterated.

(Imported between July 30 and November 17, 1907.)

New York port No.	Date received	Specific gravity at 15.6/15.6	Rotation of oil at 25° C.	Rotation of 10 per cent distillate	Difference	Refractive index of oil at 20° C.	Citral	Pinene test	Remarks
8355	July 30, 1907	0.8595	58.3	54.4	3.9	1.4745	do	Positive	Normal but for presence of pinene.
8469	Aug. 8, 1907	.8597	58.5	55.4	3.1	1.4747	do	do	Do.
8470	do	.8594	59.1	54.0	5.1	1.4746	do	do	Abnormal as to the 10 per cent distillate.
8492	Aug. 12, 1907	.8589	58.9	52.5	6.4	1.4745	do	do	Do.
8543	do	.8591	58.9	52.5	6.4	1.4745	do	do	Do.
8510	Aug. 13, 1907	.8593	59.6	54.7	4.9	1.4747	do	do	Normal but for presence of pinene.
8511	do	.8589	59.2	54.5	4.7	1.4747	do	do	Do.
8537	Aug. 19, 1907	.8589	58.9	52.2	6.7	1.4748	4.2	do	Do.
8531	do	.8590	57.6	54.5	3.1	1.4748	4.1	do	Rotation low.
8536	do	.8595	58.6	57.3	1.3	1.4748	4.5	do	Normal but for presence of pinene.
8642	Aug. 22, 1907	.8591	58.9	53.7	5.2	1.4747	3.8	do	Abnormally low citral and low rotation of 10 per cent distillate.
8698	Aug. 26, 1907	.8595	57.4	55.2	2.2	1.4743	3.9	do	Abnormally low citral.
8697	do	.8591	58.3	55.4	2.9	1.4750	4.2	do	Normal but for presence of pinene.
8673	do	.8579	59.1	57.2	1.9	1.4749	4.7	Traces	Do.
8659	do	.8600	57.4	55.1	2.3	1.4743	4.2	Positive	Rotation low.
8700	do	.8599	57.5	54.9	2.6	1.4742	4.2	do	Do.
8701	do	.8595	57.6	54.5	3.1	1.4744	4.5	do	Do.
8764	do	.8603	57.1	55.8	1.3	1.4744	4.6	do	Do.
8656	Sept. 4, 1907	.8579	60.3	57.8	2.5	1.4748	4.6	do	Normal but for presence of pinene.
8659	do	.8579	60.3	58.0	2.3	1.4748	4.6	do	Do.
8672	Sept. 7, 1907	.8580	57.9	56.9	1.0	1.4750	4.9	do	Do.
8673	do	.8587	58.1	57.1	1.0	1.4758	4.5	do	Do.
8638	Sept. 10, 1907	.8593	57.6	54.7	2.9	1.4747	3.7	do	Low citral and rotation.
9079	Sept. 17, 1907	.8585	59.1	55.5	3.6	1.4748	4.8	Traces	Normal but for traces of pinene.
9435	Oct. 7, 1907	.8587	58.6	56.5	2.1	1.4747	4.0	do	Do.
9967	Nov. 17, 1907	.8585	57.7	53.8	3.9	1.4746	do	do	Normal but for traces of pinene and low rotation.
Average		.8591	58.5	50.4	3.2	1.4747	4.3		

Table III contains analyses of oils imported between May 29 and October 11, 1907, which were adjudged to be unadulterated, and it was largely on these analyses that the judgement condemning the oils in Tables I and II was based.

Table IV contains analyses of all of the authentic factory samples made as described on Page 7.

Table V contains analyses of the oils collected in the Syracuse district from the bowls of the workmen, as described on page 6.

oil from Bastardoni lemons are produced in this district. Presence of the latter may account for the abnormal physical constants observed in some of these samples.

Table IX contains the analyses of oils collected in the same manner in the Barcelona district. Oils from this district were also reported as abnormal and of high pinene content.

Table X contains analyses of oils collected in the same manner at Patti. The oils are similar to those of the Barcelona district.

\*Concluded from November Issue.



Table XI contains samples of Commercial oils collected throughout Sicily.

Table XII contains analyses of miscellaneous samples of oils which were collected on account of their general interest and the light which they throw on the question at issue.

samples, from the six districts of Sicily. Moreover, of the 33 commercial samples, it was found in but one, No. 89, purchased at Bauso. The dealer claimed that this sample had been produced the same day and had been taken from the factory to the storeroom situated in another part of the town, but had not been mixed with oil held in stock.

TABLE III.—Analyses of oils adjudged unadulterated.

(Imported between May 29 and October 11, 1907.)

New York port No.	Date received.	Specific gravity at 15.6/15.6.	Rotation of oil at 25° C.	Rotation of 10 per cent dilute.	Difference.	Refractive index of oil at 25° C.	Citral.	Pinene test.	Remarks.
7079	May 29, 1907	0.8561	59.5	56.6	2.9	1.4750	5.1	Do.	No pinene test made.
7080	do	0.8577	58.9	56.1	2.8	1.4747	4.6	Do.	Do.
7081	do	0.8567	59.5	56.1	3.4	1.4748	4.4	Do.	Do.
7082	June 7, 1907	0.8593	59.4	56.6	2.8	1.4727	4.5	Do.	Low refractive index. No pinene test made.
7083	June 14, 1907	0.8586	58.6	56.6	2.0	1.4747	4.9	Do.	No pinene test made.
7084	June 18, 1907	0.8577	58.1	56.1	2.0	1.4751	4.9	Do.	Do.
7087	June 20, 1907	0.8570	59.5	56.3	3.2	1.4748	5.6	Do.	Do.
7087	June 21, 1907	0.8584	59.3	57.1	2.2	1.4749	6.2	Do.	Do.
7088	do	0.8576	59.4	57.7	1.7	1.4750	6.7	Do.	Do.
8018	June 28, 1907	0.8585	59.9	58.1	1.8	1.4745	6.0	Do.	Do.
8020	July 5, 1907	0.8580	59.7	56.0	3.7	1.4751	6.3	Negative	Do.
8079	do	0.8583	59.8	56.0	3.8	1.4750	6.1	Do.	Do.
8079	July 6, 1907	0.8585	59.3	54.7	4.6	1.4751	6.9	Do.	Do.
8116	July 5, 1907	0.8590	59.6	56.0	3.6	1.4750	6.2	Do.	Do.
8117	do	0.8581	59.4	56.3	3.1	1.4750	6.4	Do.	Do.
8136	July 9, 1907	0.8574	60.0	56.3	3.7	1.4745	6.0	Do.	Do.
8137	July 15, 1907	0.8585	59.6	56.2	3.4	1.4742	5.8	Do.	Do.
8150	July 9, 1907	0.8590	58.3	53.9	4.4	1.4745	5.8	Do.	Do.
8152	July 22, 1907	0.8578	58.5	53.8	4.7	1.4745	5.7	Do.	Do.
8218	July 11, 1907	0.8584	60.3	56.4	3.9	1.4743	5.8	Do.	Do.
8232	July 15, 1907	0.8578	59.9	55.6	4.3	1.4743	5.8	Do.	Do.
8286	July 18, 1907	0.8585	58.6	55.1	3.5	1.4751	5.8	Do.	Do.
8317	July 26, 1907	0.8579	60.0	56.5	3.5	1.4745	5.6	Do.	Do.
8335	July 30, 1907	0.8585	59.4	56.5	2.9	1.4745	5.8	Do.	Do.
8372	do	0.8586	57.6	54.7	2.9	1.4743	5.8	Do.	Do.
8403	Aug. 2, 1907	0.8586	60.2	55.9	4.3	1.4750	5.8	Do.	Do.
8452	do	0.8585	59.3	54.3	5.0	1.4750	5.8	Do.	Do.
8467	Aug. 12, 1907	0.8581	59.4	56.3	3.1	1.4750	5.8	Do.	Do.
8468	Aug. 8, 1907	0.8583	59.4	55.2	4.2	1.4749	5.8	Do.	Do.
8500	Aug. 17, 1907	0.8588	58.1	54.2	3.9	1.4754	5.3	Do.	Do.
8574	Aug. 22, 1907	0.8585	59.5	58.5	1.0	1.4750	6.5	Do.	Do.
8708	Aug. 26, 1907	0.8587	58.8	54.7	4.1	1.4749	6.5	Do.	Do.
8811	Sept. 10, 1907	0.8584	58.9	58.3	0.6	1.4754	4.7	Do.	Do.
9000	Sept. 11, 1907	0.8579	59.8	54.0	5.8	1.4758	4.8	Do.	Do.
9001	do	0.8580	60.0	58.9	1.1	1.4753	4.9	Do.	Do.
Average		0.8582	59.5	56.3	2.9	1.4748	5.45		

\* Omitted from averages.

TABLE IV.—Analyses of all of the authentic factory samples.

Sample No.	District, subdistrict, or town.	Date made.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 25° C.	Rotation of 10 per cent dilute at 25° C.	Difference.	Refractive index of oil at 25° C.	Citral.	Pinene test.
31	Eina, Fiumefreddo	Dec. 28, 1907	July, 1908	Poor	0.8575	61.55	57.93	3.62	1.4754	4.35	Negative.
4	Messina, city of Messina	Dec. 7, 1907	Dec. 1907	Good	0.8586	60.57	57.36	3.21	1.4758	4.62	Do.
5	do	do	do	do	0.8591	58.37	58.49	3.88	1.4756	6.99	Do.
6	do	do	do	do	0.8589	58.54	54.38	4.16	1.4754	7.03	Do.
28	Barcelona	Dec. 31, 1907	do	do	0.8586	63.03	58.75	4.28	1.4748	4.99	Do.
29	do	Jan. 8, 1908	do	do	0.8557	60.38	54.68	5.70	1.4745	5.35	Do.
104	do	Feb. 4, 1908	do	do	0.8575	61.84	57.08	4.76	1.4749	4.77	Do.
56	Palermo, city	Jan. 13, 1908	do	do	0.8575	59.34	54.35	4.99	1.4748	6.25	Do.
58	Palermo, Monreale	Jan. 14, 1908	do	do	0.8578	59.30	54.24	5.06	1.4749	5.52	Do.
60	Palermo, Ficcarazzi	do	do	do	0.8586	58.10	54.71	4.39	1.4751	5.56	Do.
63	Palermo, Partinico	Jan. 16, 1908	do	do	0.8577	60.18	56.49	3.69	1.4750	6.30	Do.
65	Palermo, city	Jan. 17, 1908	do	do	0.8583	59.94	56.68	3.26	1.4752	5.46	Do.
109	Palermo, Ficcarazzi	Feb. 12, 1908	do	do	0.8587	59.97	56.28	3.69	1.4751	5.78	Do.
113	Palermo, Monreale	Feb. 13, 1908	do	do	0.8581	58.58	54.00	4.58	1.4750	4.53	Do.
243	Palermo, city	May 18, 1908	do	do	0.8586	57.96	53.70	4.26	1.4747	4.96	Do.
Average					0.8580	59.97	55.74	4.23	1.4751	5.57	

The analytical work reported in these tables was done by Messrs. H. S. Bailey and C. O. Dodge, with the exception of the determinations given in Tables I, II and III, which were made in the New York Food and Drug Inspection Laboratory by Messrs. A. F. Seeker and L. D. Havenhill.

## DISCUSSION OF RESULTS.

In questioning the purity of the samples reported in Tables I and II it would seem that the first point to be considered is the presence of pinene. It will be noted from perusal of the remainder of the tables that the other samples of oil imported during this period gave negative results when tested for pinene. Absolutely no traces of it were found in the 15 authentic samples manufactured under personal supervision at the factories in Sicily, nor was it detected in the 130 samples, designated as bowl

This is the only instance in which pinene was detected in the samples collected, and it would seem that the only conclusion possible to draw is that the oil had been adulterated by the dealer. This had been very skillfully done, as the sample is normal in every respect except the considerable quantities of pinene, which class it as on a par with the oils of Table I.

Of the miscellaneous samples, none was found to contain pinene. Nevertheless, four of these were distilled oils, which, according to the testimony of the Italian expert who had appeared on behalf of the importers at the hearings above referred to, should be found to contain considerably larger quantities of pinene than the hand-pressed samples. This fact is not borne out by the analyses; for while the oils are highly abnormal in other respects, no traces of pinene were found in any of them.

Aside from the strongly positive tests for pinene, the next most striking feature of the oils of Table I are their abnormally low refractive indices. It will be seen from the entire average of all the samples examined (Table XII) that the average for this determination is 1.4748, the minimum 1.4743, and the maximum 1.4758. For all of the

and to one of these that substance was undoubtedly added, as the other data conclusively show that the sample had been grossly adulterated with turpentine, to such an extent that it could not contain 6 per cent of the natural citral. It will be seen from the tables that the average percentage of citral in all of the samples examined was 5.33 per cent,

TABLE V.—Analyses of oils collected from bowls of workmen in factories of the Syracuse district.

Sample No.	Town or subdistrict	Date collected.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent dilute at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.
7	Syracuse	Dec. 13, 1907	Oct. 1, 1908	Good	0.8566	61.84	58.71	2.68	1.4758	5.42	Negative.
10	do	do	July, 1908	do	0.8571	63.34	60.45	2.89	1.4754	5.05	Do.
14	Avola	Dec. 14, 1907	do	do	0.8572	61.99	60.98	1.01	1.4751	5.81	Do.
15	do	do	do	do	0.8574	65.34	63.84	2.00	1.4754	5.51	Do.
16	Messina	Dec. 16, 1907	do	do	0.8584	62.15	58.89	1.51	1.4753	5.29	Do.
17	Prilo	do	do	do	0.8577	63.09	60.91	2.18	1.4753	4.76	Do.
18	do	do	do	do	0.8571	63.66	60.40	3.26	1.4754	5.33	Do.
19	Augusta	Dec. 17, 1907	do	do	0.8580	61.78	58.89	2.89	1.4756	5.29	Do.
66	Avola	Jan. 20, 1908	Oct. 1, 1908	do	0.8579	64.39	62.53	1.86	1.4747	5.49	Do.
68	do	do	do	do	0.8592	63.62	61.19	2.43	1.4744	6.43	Do.
70	Florida	Jan. 21, 1908	do	do	0.8570	64.63	62.80	1.73	1.4741	5.88	Do.
71	Augusta	Jan. 22, 1908	do	do	0.8573	62.27	58.47	3.80	1.4748	5.78	Do.
118	Florida	Feb. 18, 1908	do	do	0.8571	62.69	60.18	2.51	1.4748	5.37	Do.
119	do	do	do	do	0.8567	61.58	57.57	3.71	1.4745	6.06	Do.
120	do	do	do	do	0.8563	61.09	61.14	2.95	1.4748	6.13	Do.
121	do	do	do	do	0.8573	62.27	58.47	3.80	1.4748	5.78	Do.
122	Augusta	Feb. 19, 1908	do	do	0.8582	64.65	63.25	1.29	1.4750	5.33	Do.
125	Syracuse	Feb. 30, 1908	do	do	0.8583	55.90	52.06	3.84	1.4717	6.13	Do.
126	do	do	do	do	0.8581	62.49	59.01	3.48	1.4745	6.28	Do.
127	do	do	do	do	0.8577	58.48	54.13	4.35	1.4747	5.44	Do.
128	do	do	do	do	0.8561	61.62	58.31	3.31	1.4746	5.56	Do.
201	Syracuse	Mar. 21, 1908	do	do	0.8569	65.68	61.96	3.72	1.4750	5.31	Do.
202	Florida	do	do	do	0.8578	62.78	59.55	3.23	1.4748	5.45	Do.
203	do	do	do	do	0.8561	63.02	58.94	4.08	1.4744	5.79	Do.
204	Avola	Mar. 23, 1908	do	Poor	0.8573	61.91	58.83	3.08	1.4748	5.98	Do.
205	do	do	do	Good	0.8577	64.03	62.45	1.58	1.4746	6.10	Do.
206	Augusta	Mar. 24, 1908	do	do	0.8577	62.20	59.94	2.26	1.4746	6.00	Do.
207	Syracuse	Apr. 27, 1908	do	do	0.8579	58.26	54.21	4.05	1.4747	5.48	Do.
231	Florida	do	do	do	0.8584	60.76	56.00	4.16	1.4744	4.99	Do.
232	do	do	do	Poor	0.8570	63.00	59.73	3.27	1.4744	5.15	Do.
233	Avola	Apr. 28, 1908	do	Good	0.8577	66.28	63.98	2.30	1.4743	5.99	Do.
234	do	do	do	do	0.8580	61.41	58.64	2.77	1.4748	5.72	Do.
284	Augusta	Apr. 30, 1908	do	do	0.8578	60.80	57.39	3.21	1.4749	4.88	Do.
Average					0.8575	62.69	59.55	2.79	1.4748	5.54	

\* Omitted from averages.

TABLE VI.—Analyses of oils collected from bowls of workmen in factories of the Etna district.

Sample No.	Town or subdistrict.	Date collected.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent dilute at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.
22	Catania	Dec. 19, 1907	July, 1908	Good	0.8572	60.70	57.17	3.53	1.4734	5.28	Negative.
23	Acì Reale	Dec. 22, 1907	Oct. 1, 1908	do	0.8571	60.61	56.11	4.50	1.4731	5.27	Do.
24	do	do	do	do	0.8576	60.76	57.22	3.54	1.4739	5.72	Do.
25	Carrubba	Dec. 23, 1907	July, 1908	do	0.8573	60.73	57.62	3.11	1.4734	4.86	Do.
26	do	do	do	do	0.8572	58.57	53.08	4.49	1.4734	5.19	Do.
29	Giarre	Dec. 25, 1907	do	Poor	0.8575	59.91	54.97	4.94	1.4753	4.68	Do.
72	Acì Reale	Jan. 23, 1908	Oct. 1, 1908	Good	0.8572	61.18	57.04	4.14	1.4743	5.44	Do.
73	do	do	do	do	0.8582	61.19	56.73	4.44	1.4745	5.43	Do.
76	Giarre	Jan. 31, 1908	do	do	0.8579	60.76	56.46	4.30	1.4741	4.99	Do.
77	Carrubba	do	do	do	0.8574	60.31	56.78	3.75	1.4745	5.18	Do.
78	do	do	do	do	0.8563	63.14	59.43	3.71	1.4747	5.15	Do.
81	Catania	Jan. 25, 1908	do	do	0.8578	61.27	59.01	2.26	1.4748	5.25	Do.
82	do	do	do	do	0.8572	61.73	58.90	2.83	1.4748	5.61	Do.
83	Flumicreddo	do	do	do	0.8576	59.63	55.11	4.54	1.4746	4.97	Do.
84	do	do	do	do	0.8586	59.94	55.21	4.73	1.4747	5.40	Do.
85	Acì Reale	do	do	do	0.8572	61.19	57.72	3.47	1.4748	5.43	Do.
87	Giardini	do	do	do	0.8573	62.47	60.79	1.68	1.4746	5.17	Do.
129	Acì Catona	Feb. 21, 1908	Nov. 1908	do	0.8573	62.48	59.51	2.97	1.4750	4.89	Do.
131	do	do	do	do	0.8588	60.87	56.83	4.04	1.4749	5.67	Do.
132	do	do	do	do	0.8583	59.48	54.08	5.40	1.4749	5.64	Do.
133	Acì Reale	do	do	do	0.8578	60.73	56.96	3.80	1.4750	5.45	Do.
134	Catania	Feb. 22, 1908	do	do	0.8578	60.19	55.95	4.24	1.4748	4.89	Do.
135	do	do	do	do	0.8581	61.86	58.82	3.04	1.4751	4.68	Do.
136	do	do	do	do	0.8573	60.44	56.62	3.82	1.4750	5.17	Do.
137	Giarre	Feb. 25, 1908	do	do	0.8569	60.95	56.97	3.98	1.4746	4.85	Do.
140	Nascali	do	Oct. 1908	do	0.8594	59.47	55.70	3.77	1.4748	5.24	Do.
141	Flumicreddo	do	do	do	0.8570	58.73	55.31	3.42	1.4746	4.67	Do.
142	do	do	do	do	0.8575	59.98	55.00	4.98	1.4748	4.38	Do.
143	Carrubba	Feb. 26, 1908	do	do	0.8576	59.84	54.59	5.25	1.4749	6.10	Do.
145	Giardini	Feb. 27, 1908	do	do	0.8575	59.26	55.26	4.00	1.4749	5.79	Do.
146	do	do	do	do	0.8567	59.69	55.88	3.81	1.4747	5.14	Do.
208	Carrubba	Apr. 3, 1908	do	do	0.8573	58.43	53.85	4.58	1.4748	5.78	Do.
209	Flumicreddo	do	Nov. 1908	do	0.8588	59.87	54.79	5.08	1.4748	6.17	Do.
210	Giardini	do	do	Good	0.8572	59.77	55.83	3.94	1.4747	4.45	Do.
284	Catania	Apr. 15, 1908	do	do	0.8577	62.48	59.50	2.98	1.4748	4.80	Do.
Average					0.8575	60.66	56.65	3.91	1.4748	5.16	

oils in Table I, the refractive index is below the minimum figure in Table XII. None of them is over 1.4740, and the average is 1.4734, or 0.0009 below the lower limit for the genuine oils. The next abnormal point in the oils in Table I is the uniformly low percentage of citral present. But two of the eleven oils have a good content of citral,

with a maximum of 7.03 per cent and a minimum of 4.07 per cent. The amount of this constituent seems to vary somewhat with the district and the season of the year in which the oil is produced. In the Messina and Syracuse districts the average citral content is slightly over 5.5 per cent, while in Etna and Palermo districts it is but little

TABLE VII.—Analyses of oils collected from bowls of workmen in factories of the Messina district.

Sample No.	Town or subdistrict.	Date collected.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent distillate at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.
23	Santa Teresa	Dec. 30, 1907	Aug. 1908	Good	0.8578	61.76	58.13	3.63	1.4757	5.08	Negative.
34	Roccamare	do	do	do	0.8577	61.04	57.26	3.78	1.4753	5.67	Do.
35	do	do	do	Fair	0.8576	61.70	57.08	4.62	1.4754	5.28	Do.
91	Bauro	Jan. 27, 1908	Oct. 1908	Good	0.8576	61.73	57.68	4.05	1.4748	5.25	Do.
98	Santa Teresa	Jan. 29, 1908	do	do	0.8557	63.26	59.65	3.61	1.4744	5.42	Do.
92	do	do	do	do	0.8567	59.02	56.42	2.60	1.4758	5.10	Do.
93	do	do	do	do	0.8560	58.96	56.80	2.16	1.4751	5.40	Do.
94	Gazzi	Jan. 30, 1908	Oct. 1908	do	0.8596	59.06	56.36	2.70	1.4752	5.70	Do.
95	Tremestieri	do	do	do	0.8577	61.25	53.49	7.76	1.4746	6.00	Do.
98	Messina	Jan. 31, 1908	do	do	0.8577	61.22	57.04	4.18	1.4745	5.88	Do.
101	Milli	do	do	Fair	0.8566	58.37	55.54	2.83	1.4750	5.36	Do.
101	Galati	do	do	Good	0.8580	60.00	55.49	4.51	1.4751	4.21	Do.
147	Santa Teresa	Feb. 27, 1908	do	do	0.8592	62.09	59.00	3.09	1.4748	5.45	Do.
148	do	do	Nov. 1908	do	0.8573	62.67	58.39	4.28	1.4746	5.83	Do.
149	do	do	do	do	0.8596	57.82	53.63	4.19	1.4748	5.87	Do.
150	Roccalumera	do	do	do	0.8595	56.49	51.98	4.51	1.4751	6.10	Do.
151	do	do	do	do	0.8575	57.44	53.46	3.98	1.4749	6.18	Do.
155	Contesse	Feb. 28, 1908	do	do	0.8578	57.83	53.53	4.30	1.4750	6.22	Do.
156	Gazzi	do	do	do	0.8599	58.69	53.77	4.92	1.4749	5.83	Do.
157	Santa Andre	Feb. 29, 1908	do	do	0.8576	59.38	56.50	2.88	1.4754	5.79	Do.
158	Bauro	do	Nov. 1908	do	0.8579	58.96	54.68	4.28	1.4748	5.24	Do.
159	do	do	do	do	0.8575	62.35	58.23	4.00	1.4746	5.45	Do.
211	Gazzi	Apr. 4, 1908	do	do	0.8567	58.47	53.92	4.55	1.4751	6.34	Do.
212	Tremestieri	do	Dec. 1908	Good	0.8568	60.91	56.72	4.19	1.4744	6.37	Do.
215	Messina	do	do	do	0.8576	59.77	54.68	5.09	1.4744	6.54	Do.
222	Bauro	Apr. 14, 1908	do	Fair	0.8571	60.84	56.74	4.10	1.4738	4.94	Do.
226	Contesse	May 12, 1908	do	Good	0.8592	61.70	51.19	10.51	1.4750	5.76	Do.
238	Gazzi	May 14, 1908	do	do	0.8585	63.99	57.08	6.91	1.4748	5.89	Do.
240	Tremestieri	do	do	do	0.8579	62.16	51.82	10.34	1.4745	4.99	Do.
242	Messina	do	do	do	0.8576	59.61	53.02	6.59	1.4743	4.65	Do.
245	Letoauri	May 23, 1908	do	Good	0.8592	64.16	49.08	15.08	1.4749	6.28	Do.
Average					0.8581	59.78	55.81	3.98	1.4749	5.57	

\* Omitted from averages.

TABLE VIII.—Analyses of oils collected from bowls of workmen in factories of the Palermo district.

Sample No.	Town or subdistrict.	Date collected.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent distillate at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.
53	Palermo	Jan. 12, 1908	Aug. 1908	Good	0.8569	59.32	55.39	3.93	1.4752	5.40	Negative.
117	Monreale	Feb. 13, 1908	Oct. 1908	do	0.8598	66.83	62.42	4.41	1.4751	4.92	Do.
111	Palermo	Feb. 16, 1908	do	Fair	0.8588	58.25	54.38	3.87	1.4750	5.62	Do.
216	Piccarazzi	Apr. 7, 1908	Nov. 1908	Good	0.8581	57.35	52.51	4.84	1.4748	5.40	Do.
218	Palermo	do	do	do	0.8577	59.32	54.24	5.08	1.4744	5.64	Do.
220	Monreale	Apr. 8, 1908	do	Fair	0.8594	58.55	54.67	3.88	1.4749	5.71	Do.
220	Partinico	Apr. 9, 1908	do	Poor	0.8579	61.69	58.29	3.40	1.4747	6.53	Do.
221	do	do	do	Good	0.8580	61.33	56.40	4.93	1.4745	4.72	Do.
241	Monreale	May 16, 1908	do	do	0.8573	54.83	50.81	4.02	1.4747	4.62	Do.
244	Palermo	May 19, 1908	do	do	0.8584	56.74	51.33	5.41	1.4744	4.11	Do.
261	do	June 24, 1908	Dec. 1908	do	0.8578	58.03	53.67	4.36	1.4744	5.13	Do.
Average					0.8580	58.40	53.97	4.42	1.4747	5.15	

TABLE IX.—Analyses of oils collected from bowls of workmen in factories of the Barcelona district.

Sample No.	Town or subdistrict.	Date collected.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent distillate at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.
40	Barcelona	Jan. 3, 1908	Aug. 1908	Poor	0.8566	64.21	60.73	3.48	1.4750	5.02	Negative.
102	do	Feb. 3, 1908	Oct. 1908	Good	0.8570	57.79	51.62	6.17	1.4745	4.34	Do.
167	do	Mar. 7, 1908	Nov. 1908	do	0.8579	60.97	55.92	5.05	1.4748	5.10	Do.
218	do	do	do	Poor	0.8569	63.12	60.09	3.03	1.4746	4.96	Do.
227	do	do	do	Fair	0.8569	59.79	54.93	4.86	1.4745	5.12	Do.
227	do	Apr. 21, 1908	do	Good	0.8573	59.33	54.52	4.81	1.4746	5.28	Do.
228	do	do	do	do	0.8577	60.76	56.46	4.30	1.4747	6.29	Do.
248	do	May 27, 1908	do	do	0.8567	59.73	55.18	4.55	1.4747	4.81	Do.
249	do	do	do	do	0.8577	63.29	53.57	9.72	1.4749	4.43	Do.
250	do	do	do	do	0.8564	60.07	54.18	5.89	1.4744	4.41	Do.
251	do	do	do	do	0.8567	57.94	51.49	6.45	1.4747	4.85	Do.
Average					0.8571	60.14	55.33	4.81	1.4747	4.96	

TABLE X.—Analyses of oils collected from bowls of workmen in factories of the Patti district.

Sample No.	Town or subdistrict.	Date collected.	Date examined.	Condition of sample.	Specific gravity at 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent distillate at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.
41	Patti	Jan. 3, 1908	Aug. 1908	Good	0.8575	62.73	58.75	3.98	1.4751	5.02	Negative.
102	do	do	do	do	0.8572	62.10	57.67	4.43	1.4752	4.44	Do.
167	do	Feb. 6, 1908	do	do	0.8575	60.45	56.56	3.89	1.4748	5.70	Do.
218	do	do	do	do	0.8565	61.02	56.44	4.58	1.4745	4.61	Do.
227	do	Mar. 6, 1908	do	Fair	0.8567	62.94	59.81	3.13	1.4746	4.23	Do.
228	do	do	Nov. 1908	Good	0.8578	60.44	56.80	3.64	1.4749	4.15	Do.
248	do	Apr. 21, 1908	do	do	0.8579	59.25	54.41	4.88	1.4748	4.07	Do.
249	do	May 27, 1908	do	do	0.8578	58.66	54.98	3.68	1.4748	4.66	Do.
250	do	do	do	do	0.8569	60.34	55.49	4.85	1.4748	4.60	Do.
Average					0.8573	61.11	56.73	4.37	1.4747	4.66	

over 5 per cent. The samples from Barcelona and Patti contain less than 5 per cent of citral, the percentage in the latter case being but slightly over 4.5.

In considering the citral content of the oils in question it should be remembered that it is not usual to export from Sicily a consignment of oil produced in one district

except for oils of the Barcelona and Patti districts.

The specific gravity of the oils, while in every case within the figures usually given for genuine oils, is uniformly high, the average of the 11 being 0.8602, compared with the entire average of 0.8577 and a maximum of 0.8606 and minimum of 0.8557, this figure being un-

TABLE XI.—Analyses of samples of commercial oils collected throughout Sicily.

Sample No.	District, subdistrict, or town.	Date purchased.	Date examined.	Condition of sample.	Specific gravity at 20° C.	Rotation of oil at 20° C.	Rotation of 10 per cent dilute at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.	Dealer.
11	Syracuse, Florida....	Dec. 13, 1907	July, 1908	Good...	0.8571	63.78	61.95	1.81	1.4752	5.41	Negative.	Carmelo Pezzinga.
12	do	do	do	do	0.8569	63.56	60.38	3.18	1.4751	4.56	do	Giuseppe Scionti.
13	Syracuse, Avola....	Dec. 14, 1907	do	do	0.8664	64.07	61.94	2.13	1.4755	6.97	do	Giovanni de Luca & Sons.
124	Syracuse....	Feb. 20, 1908	June, 1908	do	0.8578	60.64	58.32	2.32	1.4756	4.99	do	Giuseppe de Luca.
32	Etna, Piumefreddo....	Dec. 28, 1907	July, 1908	do	0.8575	61.38	57.72	3.66	1.4754	5.06	do	Papandrea Bros.
79	Etna, Mascali....	Jan. 24, 1908	June, 1908	do	0.8558	61.00	56.12	4.88	1.4759	5.29	do	Francesco Cucinotta & Son.
80	Etna, Catania....	Jan. 25, 1908	Oct., 1908	do	0.8581	59.09	54.88	4.21	1.4748	6.94	do	Cucinotta Bros.
139	Etna, Mascali....	Feb. 25, 1908	Nov., 1908	do	0.8577	60.04	55.28	4.76	1.4748	5.03	do	L. Mauro Giardina.
142	Etna, Piumefreddo....	do	May, 1908	do	0.8605	58.55	56.64	1.91	1.4753	4.53	do	Leonardi & Cucinotta.
223	Etna, Catania....	Apr. 15, 1908	Oct., 1908	do	0.8608	60.32	56.94	3.38	1.4750	4.94	do	Cucinotta Bros.
263	Etna, Giardini....	June 24, 1908	Dec., 1908	do	0.8576	60.25	55.74	4.51	1.4746	5.62	do	De Pasquali.
264	do	do	do	do	0.8579	56.22	50.70	5.52	1.4741	5.29	do	A. Roberto.
265	do	do	do	do	0.8575	62.58	59.11	3.47	1.4749	5.11	do	M. Giordano.
89	Messina, Buzze....	Jan. 27, 1908	Oct., 1908	do	0.8582	61.18	57.57	3.61	1.4746	6.83	Positive.	Rosario Ferrigno.
90	Messina, Rometta....	do	do	do	0.8572	61.79	56.28	5.51	1.4746	6.01	Negative.	Dominico Revici.
152	Messina, Scaletta....	Feb. 27, 1908	Nov., 1908	do	0.8597	58.53	54.95	3.58	1.4750	5.68	do	Antonio de Blase.
153	do	do	Dec., 1908	do	0.8585	58.32	54.63	3.69	1.4751	5.34	do	Salvatore Audifert.
213	Messina, Galati....	Apr. 4, 1908	do	do	0.8575	59.62	55.57	4.05	1.4746	4.48	do	Vincenzo Rizzo.
214	Messina, Mizz....	do	do	do	0.8569	57.57	53.96	3.61	1.4753	6.46	do	Giovanni Brescilio.
227	Messina, Gazi....	May 12, 1908	do	do	0.8592	58.64	54.84	3.80	1.4749	4.81	do	Onifero Garuti.
37	Barcelona....	Dec. 15, 1907	Oct., 1908	do	0.8560	62.38	57.64	4.74	1.4749	4.92	do	Giuseppe Genovesse.
170	do	Mar. 7, 1908	do	do	0.8582	60.47	56.51	3.96	1.4748	5.08	do	Antonino Campo.
226	do	Apr. 21, 1908	do	do	0.8581	59.97	56.10	3.87	1.4744	5.56	do	Giuseppe Genovesse.
249	do	May 27, 1908	Nov., 1908	do	0.8577	58.29	53.57	4.72	1.4749	4.43	do	Antonio Perdicchi.
62	Palermo, Ficorazzi....	Jan. 14, 1908	Oct., 1908	do	0.8570	59.82	57.01	2.81	1.4750	5.78	do	Antonio Canizaro.
114	Palermo, Terrasini....	Feb. 13, 1908	do	do	0.8585	59.04	55.29	3.74	1.4749	6.05	do	Marco Carillo.
115	Palermo, Partinico....	Feb. 14, 1908	June, 1908	do	0.8581	59.90	57.37	2.53	1.4758	4.51	do	Giuliano Guercia.
242	Palermo, Caccarasi....	May 16, 1908	Nov., 1908	do	0.8591	57.97	54.02	3.95	1.4747	4.80	do	Antonio Canizaro.
260	do	June 24, 1908	Dec., 1908	do	0.8588	56.83	50.85	5.98	1.4746	4.53	do	Do.
282	Palermo, Monreale....	June 25, 1908	do	do	0.8580	57.12	52.99	4.13	1.4745	5.58	do	Giuseppe Nicolosi.
107	Santa Agata....	Feb. 6, 1908	Oct., 1908	do	0.8583	62.34	58.53	3.81	1.4748	5.71	do	Constantino Speciale.
108	do	do	do	do	0.8581	58.86	54.93	3.93	1.4745	5.09	do	André Speciale.
174	Etna, Aci Reale....	Jan. 23, 1908	do	do	0.8574	61.19	57.31	3.88	1.4748	5.77	do	Angelo Belto Russo.
Average					0.8602	59.92	56.12	3.81	1.4749	5.26		

\* Excluded from average.

TABLE XII.—Analyses of miscellaneous samples of oils.

Sample No.	Description.	Date collected.	Date examined.	Condition.	Specific gravity, 15.6/15.6.	Rotation of oil at 20° C.	Rotation of 10 per cent dilute at 20° C.	Difference.	Refractive index of oil at 20° C.	Citral.	Pinene test.	Remarks.
161	Calabrian machine-made oil.	Mar. 5, 1908	Dec., 1907	Poor...	0.8575	60.73	59.26	1.47	1.4746	5.58	Negative.	Sample taken from filter.
162	do	do	do	Fair	0.8586	55.52	52.31	3.21	1.4747	6.73	do	Do.
163	do	do	do	Good	0.8593	60.75	57.04	3.71	1.4747	6.34	do	Sample from stock on hand.
Average					0.8593	58.33	56.20	2.13	1.4747	6.22		
100	Calabrian hand-pressed oil.	Mar. 5, 1908	Dec., 1908	do	0.8583	58.93	54.77	4.16	1.4749	5.29	do	Commercial sample.
Distilled oils.												
36	Barcelona....	Dec. 31, 1907	Oct., 1908	Good...	0.8579	64.60	63.64	0.96	1.4729	1.58	do	Sample taken from still.
108	do	Feb. 3, 1908	do	do	0.8523	60.84	58.19	2.65	1.4728	8.4	do	Do.
61	Palermo....	Feb. 12, 1908	do	do	0.8522	61.01	51.88	9.13	1.4727	1.54	do	Do.
110	do	Jan. 14, 1908	do	do	0.8515	61.12	50.67	10.45	1.4727	1.32	do	Do.
Average					0.8518	61.89	51.07	10.90	1.4727	1.33		
Oils pressed from feces.												
95	Etna, Aci Reale....	Jan. 23, 1908	Dec., 1908	Good...	0.8575	61.65	57.65	4.00	1.4749	6.20	do	Sample taken from filter.
99	Messina....	Jan. 31, 1908	Oct., 1908	do	0.8589	61.11	57.75	3.36	1.4746	5.40	do	Do.
Oil from "Bastardoni" lemons.												
67	Palermo, Monreale....	Jan. 13, 1908	Dec., 1908	Good...	0.8574	56.60	50.63	5.97	1.4748	4.59	do	Authentic sample.
Old oil.												
29	Etna, Carrubba....	Dec. 23, 1908	Dec., 1908	Fair...	0.8610	61.24	56.85	4.39	1.4754	.....	do	Commercial sample prepared at the Di Mauro factory in 1892.
Average of bowl and authentic samples.					0.8577	60.72	.....	3.85	1.4748	5.33		
Maximum					0.8606	66.58	.....	6.17	1.4758	7.03		
Minimum					0.8557	54.16	.....	1.01	1.4743	4.07		

\* 130 bowl samples and the 15 authentic samples made in factories are included.

solely, such consignments, in a great majority of cases, being made up of mixtures of oil from several districts. Three of the oils in Table I contain less than 4 per cent of citral and could have been rejected solely on this ground. A fourth oil containing 4.1 per cent should also be classed with them. Three of the oils contained 4.7 per cent and one other 4.5 per cent, which is an unusually low figure

usually uniform on the authentic samples, as the district averages show.

Considering the rotation of the oils, it will be seen that four of them would fall below 58° if determined at 20° C.

A Apply correction of  $-1.1^{\circ}$  C, as determinations were made at  $25^{\circ}$  C.



This figure does not, however, seem to be unusual in the case of oils from the Messina and Palermo districts. The entire average rotation is above  $60^\circ$ , while the lowest district average, that of Palermo, is  $58.4^\circ$ . Individual samples often show lower rotations, although in many instances explanation of their abnormal character is not wanting, as in the case of Palermo oils, where the oil from Bastardoni lemons is largely responsible for low rotations; oils produced late in the season are also often abnormal in this respect.

Turning to Table II, the chief cause of complaint against the oils is the presence of pinene. Of the 26 oils, all but 4 contain pinene in what was considered by the analyst as more than traces. With one exception the refractive indices of these oils are normal and the average is approximately that of the entire average for authentic samples. The citral content is again unusual and uniformly low; three of the samples having below 4 per cent. could have been rejected on this abnormality alone. The average of the 18 samples upon which citral was determined is but 4.3 per cent. The specific gravity is again uniformly high, the minimum figure, 0.8579, being slightly above the average of the authentic samples. Some of the samples are unusually low in rotation; in comparing these figures with those on the authentic samples, however, it is to be noted that the rotation of imported samples was determined at  $25^\circ \text{C}$ ., while that on the authentic samples was determined at  $20^\circ \text{C}$ ., so that a correction of  $-1.1^\circ$  should be made.

Comparing the oils of Tables I and II with those of Table III, which are the importations of other firms offered for entry during the same period of time, it will be seen that but two of the latter samples are abnormally low in refraction. One of these oils had not been tested for pinene, and it is possible, of course, that had this test been made it would have been included in the other tables. The second sample is but 1 point in the fourth decimal place below the minimum obtained on the authentic samples. The citral is uniformly much higher, but one sample falling below 4.5 per cent, while the average is approximately that obtained in the authentic samples. The specific gravity is not uniformly so high, the average being but 5 points in the fourth decimal place above that obtained on the authentic samples.

It is not the purpose in this circular to discuss the data on the genuine samples given herewith except as it bears on the question under discussion, and, indeed, it would seem that the case presented is sufficiently strong to need very little discussion. The matter will therefore be closed with a summary of the evidence submitted.

In all, there were 37 lots of oil detained at the port of New York pending the settlement of this controversy. Eleven of these oils, offered for entry between May 17 and June 26, gave very strong positive tests for pinene and were otherwise abnormal. The remaining 26 lots offered for entry between July 30 and November 17, contained considerable pinene, except in four cases, where the analysts reported traces only and were otherwise abnormal.

During this same period of time 35 samples of lemon oil were offered for entry by other importers at New York, 25 of which contained no pinene, the remainder not having been tested for that substance. In practically every case these oils presented normal physical and chemical constants. Fifteen samples of oil manufactured under the personal supervision of the writer in several districts throughout Sicily not only gave no test for pinene, but showed none of the abnormal physical constants which the oils in question gave. Analyses of 130 bowl samples are given, all of which gave negative results in the tests for pinene, and while in some cases certain of the physical constants are abnormal, the great majority of them are closely uniform and in no way present the abnormal figures obtained on the other oils under discussion. Wherever the miscellaneous samples bear on the question at issue, their testimony undoubtedly goes to prove that the oils were adulterated.

The only reasonable conclusion would seem to be that where pinene is found in lemon oil, using only ordinary means of distillation, it is *prima facie* proof of adulteration, whether or not the physical constants of the oil are abnormal.

### YLANG-YLANG OIL.

Some interesting information on this oil is given by Raymond F. Bacon in the *Philippine Journal of Science* (1908, 3, 64). The production has increased enormously in recent years, the exports (including packages, which amount perhaps to nine-tenths of the whole) in the period 1904-7 being 10,917, 13,395, 27,909 and 27,036 kilos, respectively. Two grades of oil are produced in the Philippines, "bests," worth 200 pesos per kilo., and "seconds," valued at 30 to 71 pesos per kilo. It is said that a good demand exists for the former, but the latter is difficult to dispose of in competition with artificial ylang-ylang and cananga oils. Distillers buy the flowers from the native growers, who are said to wet the flowers with as much water as they will hold, and also to add extraneous leaves, etc. Although a much better oil is obtained from the mature flowers, over three-quarters of the flowers used for distillation are unripe and green. The usual price for flowers in Manila is 30 centavos per kilo., and, on an average, 350 kilos. of flowers yield one kilo. of first-class oil and an additional 0.75 kilo. of the second quality, so that the profit accruing to the distiller does not appear to be large. The flowers are generally collected in May and June, but the season was late last year, distillation starting in August. The industry is carried on mainly in Manila, but also in the provinces of Mindoro, Albay and the Camarines. The provincial distillers are at an advantage compared with those in Manila, in that they get their flowers cheaper and of better quality, but as the provincials are not so careful in distilling, their oil is generally inferior. Much mystery surrounds the distillation of the first grade of oil, but in Mr. Bacon's experience the only points requiring special attention are that the distillation be conducted slowly with clean steam, and that not more than 1 kilo. of oil be collected from 400 kilos. of flowers. Any further oil obtained should be kept separate and sold as second class. The distillation apparatus should be lined with block tin or nickel throughout. The examination by Mr. Baker of twenty-three samples of first-grade oil and sixteen samples of the second-grade product resulted as follows:

	First-grade Oil (23 samples)	Second-grade Oil (16 samples)
Specific gravity ( $30-34^\circ \text{C}$ )...	0.827 to 0.949	0.896 to 0.940
Optical rotation .....	$+26^\circ$ to $-49.7^\circ$	$-27.7^\circ$ to $-87.0^\circ$
Refractive index (at $30^\circ \text{C}$ for D line) .....	1.4747 to 1.4940	1.4838 to 1.5082
Ester number .....	95 to 129.7	49 to 94

These results all indicate that an oil with a low refractive index, low rotation and high ester number is certain to be good. Distillation experiments conducted *in vacuo* showed that of a first-grade oil 50 per cent. will pass over below 100 degs. under 10 mm. pressure. The common adulterants of Philippine ylang-ylang oil are said to be alcohol, turpentine oil, coconut and other fixed oils. Mr. Bacon, however, does not believe that sophistication is commonly practiced, but he has seen samples of a highly refined turpentine oil said to be prepared for the use of ylang-ylang distillers, who are stated to sprinkle it on the flowers before distillation. Turpentine oil is best detected by distilling 100 c.c. of the oil under 10 mm. pressure, when not more than 1 c.c. should come over below 65 degs. Cent. Pinene is readily found in such a low-boiling fraction by the usual methods. Alcohol and coconut oil can be detected by the ordinary tests. The author also studied the proximate composition of ylang-ylang oil, and has added two new constituents to those already known—viz., safrol and formic acid, the latter being present as an ester.

# THE GOVERNMENT WINS IN EXTRACT SUITS

We have obtained the information herewith given in regard to prosecutions brought by the Government against certain manufacturers of flavoring extracts, certain of whose products were alleged to have been adulterated and misbranded. The salient points in these cases are of prime interest to all manufacturers, and those points are fully covered by our excerpts of the records of the cases. Anyone desiring a complete transcript of the records may obtain same by addressing the clerk of the United States District Court in the cities where the cases were tried.

The technical comment of Judge McPherson are somewhat novel in that they do not follow accepted scientific facts very closely, especially when he says that citral has no flavor and the principal value of lemon oil lies in the terpenes. We trust that his conclusions were not based primarily on these premises.

## MISBRANDING OF LEMON FLAVOR.

(As to Presence of Lemon Oil and Citral.)

In accordance with the provisions of the Food and Drugs Act of June 30, 1906, suit was brought by the United States in the District Court of the United States in the St. Joseph division of the Western District of Missouri, in September Term, 1908, against the Nave-McCord Mercantile Co., St. Joseph, Mo.

There are three counts in the indictment.

### FIRST COUNT.

"The said corporation did on or about the 16th day of August, 1907, unlawfully, knowingly and wilfully, ship and deliver for shipment to Armstrong Brothers, Atchison, Kan., three dozen bottles purporting and representing to be lemon and citral flavor, which product was misbranded, by labeling as follows: (Front of carton) 'Eden Brand, Flavor of Lemon and Citral—Natural Color—Armstrong Brothers, Atchison, Kan.—Cash or Nothing.' (One side of carton) 'A Pure Flavor.' (Other side of carton) 'For flavoring Ice Cream, Jellies, Custards, Pastry, etc.' (Back part of carton) 'All goods packed under our brand are reliable, economical and invariably produce satisfactory results.' In fact, said bottles, and the said product contained therein, did not contain any measurable and appreciable quantity of lemon oil, which said lemon oil in measurable and appreciable quantity is a necessary and essential ingredient of a pure lemon flavor.

### SECOND COUNT.

Said article of food was misbranded as follows: 'A Pure Flavor,' which said marking and labeling was stated to convey to the purchasing public, meaning that said article of food was a pure flavor or extract derived from the lemon fruit, containing among other things the oil of lemon and citral derived from such fruit, when in truth and in fact, said article of food contained no pure lemon oil, and did contain an added substance not derived from the lemon fruit, to wit: Citral, and when in truth, and in fact, pure food flavors are derived either from the fruit directly or by the solution of the essential oil of the fruit through the medium of alcohol.

### THIRD COUNT.

Said articles of food were adulterated and misbranded by the marking and labeling as follows, to wit: (Front of carton) 'Eden Brand Flavor of Lemon and Citral—Natural Color—Armstrong Brothers, Atchison, Kan.—Cash or Nothing.' (One side of carton) 'A Pure Flavor.' (The other side of carton) 'For flavoring Ice Cream, Jellies, Custards, Pastry, etc.' (Back part of carton) 'All goods packed under our brand are reliable, eco-

nomical, and invariably produce satisfactory results'; and further by marking and labeling as follows: 'Eden Brand Flavor of Lemon and Citral—Natural Color—put up for Armstrong Brothers, Atchison, Kan.—Cash or Nothing.'

The said labels, marks and brands and the statements then made regarding such articles and the ingredients and substance contained therein were false and misleading in this: That said article was an imitation of the true lemon flavor commonly called lemon extract, and of far less value, strength and efficacy than true lemon flavor, and that nowhere on the cartons enclosing said bottles nor on the said bottles was any label so as to plainly indicate that said article was an imitation of said lemon flavor or extract; nor was the word 'Imitation' plainly stated on the package."

The defendant waived the right of trial by jury, and therefore the following opinion and findings of fact and conclusions were rendered by Judge Smith McPherson, on Sept. 20, 1909.

### FINDING OF FACT AND CONCLUSIONS, AND OPINION.

The defendant is a corporation. The proceeding is by information brought by the United States Attorney acting in his official capacity. It is not verified, excepting as the United States Attorney is acting under his official oath of office, and is filed under section 2 of the Act of Congress of June 30, 1906 (34 Statutes at Large, p. 768), being an act to prevent the interstate sales of impure foods and drugs.

The information charges the shipment by defendant at St. Joseph, Missouri, to a grocer at Atchison, Kansas, of an extract or essence which falsely purported to be of lemon and citral flavor, and being misbranded.

The penalty for the violation of that section is for the first offense, a fine of not exceeding two hundred dollars, and for each subsequent offense a fine of not exceeding three hundred dollars, or imprisonment not exceeding one year, or both. A corporation defendant, as of course, can only be fined.

The defendant invokes the Fifth Amendment to the Constitution, which provides that:

"No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment of indictment of a grand jury."

An infamous crime must either have been a felony at common law, or punishable by imprisonment in the penitentiary under the statute.

The crime in question did not exist at common law, and was first denounced by the statute under which this information was filed, which expressly provides that whoever violates it "shall be guilty of a misdemeanor."

A jury cannot be waived in any jurisdiction in a felony, and in some jurisdictions cannot be waived in a misdemeanor. As to the latter there is a conflict of authority. See footnote to *In re McDowd*, Vol. II L. R. A. (New Series) 1136, where all the cases are collected. But in petty misdemeanors in United States Courts a jury may be waived.

As criminal prosecutions at common law, in many instances, were prosecuted by information, and as the Fifth Amendment only excepts capital crimes and infamous offenses, and this being a petty misdemeanor in which a trial jury can be waived, there can be no well grounded doubt but that this offense can be prosecuted by information.

2. It is urged by defendant's counsel that the seizures of some of the misbranded goods as alleged, and the issuance of process bringing defendant into court under an unverified information, although filed by the United States Attorney in his official capacity, is violative of the Fourth Amendment to the Constitution, which is:

"The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

It will be observed that searches and seizures are not prohibited, but it is that there shall be no unreasonable searches and seizures. There never has been a time when stolen goods, property used with which to commit crime, contraband goods of all kinds, such as intoxicating liquors, gambling devices, deleterious foods, poisons, and that which is harmful to the public health, have not been subject to seizure by proper procedure, under proper safeguards. Such right existed at common law, and today exists in every State of the Union. To deny this, is to deny the right to punish for crime, or to protect the morals or health of the public.

3. It is known by all, that for years it was difficult to obtain for food and medicine that which was wanted and paid for, owing to misbranding and adulterations, and that the evils had become so great, that many of the States, as well as the general government sought to remedy the evil

by legislation. The opposition to such legislation by manufacturers and merchants was persistent, which has not wholly abated. The making and selling of a fraudulent or adulterated article for and at the price of the genuine article resulted in unwarranted profits. As a remedy in part, Congress enacted the Statute of June 30, 1906. How this policy as evidenced by this statute can be complained of, is difficult to appreciate. Why foods and medicines should be made or sold under the name of that which the consumer wants and pays for, and yet loaded with poisonous preservatives and adulterations, cannot easily be reconciled with common honesty. And it is vicious, although of a less degree, to make or sell that which is not poisonous or harmful, but cheapened by adulterations and substitutions to the deception of the buyer and consumer.

These recitals of the information are true. That is to say the following are the facts:

Prior to the enactment of the statute, and the pure food statutes by the States, the label used by defendant for his same compound was, "Extract of Lemon."

An analysis of the fluid covered by the charge herein as made by Arthur L. Sullivan, a chemist of the Agricultural Department of the Government, is as follows:

Alcohol .....	26.9
Citral .....	0.027
Solid or extract material.....	0.12
Water .....	72.953
Total .....	100.00

Edward Rollier, the chemist and pharmacist of defendant, who superintends the manufacture by defendant of the alleged contraband, testifies that the following are the percentages:

Alcohol .....	33.33
Citral .....	0.15
Lemon oil .....	0.52
Water .....	66.00
Total .....	100.00

There is a great deal of technical testimony in the case, but the foregoing percentages show what each side contends for, and the difference between the two tables of percentages is very slight. It will be observed that the principal ingredient is water, according to either table. According to one table, about twenty-five per cent. is alcohol, and according to the other table, thirty-three per cent. Both tables are noticeable by the absence of both lemon oil and the seed grass extraction, called citral, except in infinitesimal quantities. There is just enough for odor and not enough for flavor or taste.

The citral has no flavor, or but barely appreciable, but does have a lemon odor, and is taken from a grass grown in India, and perhaps other Asiatic countries, while lemon oil is only taken from the peel of lemon fruit. Two thousand lemons are necessary to make a pound of oil. Lemon oil contains about four per cent. of citral, which is an aldehyd, and requires a solution of fifty per cent. alcohol to dissolve ten per cent. of citral. Citral has little or no taste and no flavor, but does have the lemon odor.

In flavors the oil of lemon is somewhat expensive, and the alcohol costs from two to three dollars per gallon. The fluid in question is sold by defendant, so that the purchasing grocer can at a profit retail the two-ounce bottle filled at ten cents.

Defendant manufactures and sells and ships, State and inter-State, other two-ounce bottles filled and labeled, "Extract of Lemon," containing from five to seven per cent. lemon oil, and eighty to ninety per cent. alcohol, but which the retail grocer must sell at twenty-five cents per bottle to realize a fair profit.

Under the statute of March 3, 1903, a committee of Agricultural and Food Chemists and Scientists were appointed, which made a report, and that was approved prior to the statute under which this case was brought. This was done to form certain standards of purity for food products, and to determine what are adulterations. That recites that "lemon extract" is the flavoring extract prepared from oil of lemon, or from lemon peel, or both, and contains not less than five (5) per cent. by volume of oil of lemon.

Lemon oil is defined to be a volatile oil obtained by expression or alcoholic solution from the fresh peel of the lemon, and contains not less than four per cent. of citral.

Section Two, under which this proceeding is brought, makes it unlawful to sell and ship into another State food or drugs which are adulterated or misbranded. So that if the article thus sold is either adulterated or misbranded, it is in violation of the statute. The question is not in this case, whether the article is deleterious. It may be nutritious and it may be wholesome. Brown sugar may be, and quite likely is, as wholesome as maple sugar. Glucose or beet sugar for some purposes is as good as cane sugar. But that is not to the question; and if it were the question, it is not for the grocer to determine. So the question is not whether the flavor sold by the defendant is deleterious, or whether it is satisfactory to the trade. But is it adulterated or misbranded? And if it is either, then it is contraband.

The statute recites:

"Sec. 7. That for the purposes of this Act an article shall be deemed to be adulterated;

"In the case of food:

"First, if any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength.

"Second, if any substance has been substituted wholly or in part for the article."

By Section 8 of the statute an article of food is misbranded, the label of which shall bear any statement, design or device, which shall be false or misleading in any particular.

So that the merchandise complained of was adulterated, because under the statute the requisite amount of neither alcohol nor oil of lemon was present, and too much water was substituted for the alcohol. It was misbranded because by the use of the word "flavor" instead of "extract" there was a design and device both false and misleading. It is put out with the purpose of making purchasers believe that they are getting of an extract a two-ounce bottle for ten cents, which in truth when an extract can only be had for twenty-five cents. The one is a pretense, device and a cheat. The other complies with the statute, and the formulae, rules and regulations of the Secretary of Agriculture and those aiding him.

There will be a judgment of conviction against the defendant.

Saint Joseph, Missouri, September 20, 1909.

The Court assessed a fine of \$200 and costs, from which the defendant has appealed.

## ADULTERATION AND MISBRANDING OF LEMON EXTRACT.

(As to the percentage of lemon oil present.)

### FIRST COUNT.

An information was filed against the Hall-Whitney Mfg. Co., Binghamton, N. Y., on the 5th day of October, 1909, by the United States District Attorney for the Western District of New York, for adulteration and misbranding of lemon extract, of which the following is an accurate condensation:

The Hall-Whitney Mfg. Co., Binghamton, N. Y., on June 4, 1908, shipped to Erwin & Eberwine, Evansville, Ind., 2½ gross of so-called lemon extract adulterated within the meaning and terms of section 7 of the Food and Drugs Act of June 30, 1906, labeled as follows: "Finest Quality, E. & E. Trade Mark, Strictly Pure Flavoring Extract of Lemon, Color Simulated—Guaranteed under the Pure Food and Drugs Act, June 30, 1906. Serial No. 5,929. Distributors, Erwin & Eberwine, Evansville, Ind."

That said article of food was *adulterated* within the terms and in violation of the act of Congress, aforesaid, in the following particulars: That whereas the said label attached to the said article of food contained the statement that it was a strictly pure flavoring extract of lemon, in fact, said article of food was not strictly extract of lemon; but another substance, to wit, dilute extract of lemon had been unlawfully and knowingly substituted wholly or in part.

### SECOND COUNT.

This count of the information charged *misbranding* within the terms and meaning of section 8 of the Food and Drugs Act of June 30, 1906, in that the label and the representations and statements contained thereon were false and misleading, and intended and calculated to deceive the purchaser.

## ADULTERATION AND MISBRANDING OF VANILLA EXTRACT.

(As to the addition of Vanillin and Caramel.)

On the 5th of October, 1909, an information was filed against the Hall-Whitney Mfg. Co., Binghamton, N. Y., by the United States District Attorney, for the Northern District of New York, alleging that the said company shipped to Williams Bros. Co., Cleveland, Ohio, a certain article of food called "Williams Brand Flavoring Extract of Pure Vanilla, Guaranteed under the Pure Food and Drugs Act, June 30, 1906. Distributors, Williams Bros. Co., Cleveland, Ohio."

### FIRST COUNT.

Said article of food was *adulterated* within the meaning of section 7 of the Food and Drugs Act, June 30, 1906, in that it was not a flavoring extract of pure vanilla; but that other substances, to wit, vanillin and caramel had been substituted wholly or in part for the said flavoring extract of pure vanilla.

### SECOND COUNT.

This count of the information holds that the above mentioned extract was *misbranded* within the terms of section



8 of the Pure Food and Drugs Act, June 30, 1906, in that the label and the representations and statements contained thereon were false and misleading, and calculated to deceive the purchaser.

To both of these informations the Hall-Whitney Mfg. Co. pleaded guilty at a term of the United States District Court held at Utica, which commenced on Dec. 7, and on each information a fine of \$100 was imposed, which was paid.

### ADULTERATION AND MISBRANDING OF LEMON EXTRACT.

(As to the presence of Lemon Oil.)

An information containing six counts was filed against the Forbes Bros. Tea & Spice Co., St. Louis, Mo., in the United States District Court of the Eastern District of Missouri on Sept. 27, 1909, charging said company had violated the Food and Drugs Act of June 30, 1906, by shipping to Cohen Bros., Hearn, Tex., lemon extract that had been adulterated and misbranded.

A second information containing two counts was filed on Nov. 9, 1909. These two cases were consolidated for trial, and resulted in the following verdicts:

Guilty on counts 1, 2, 5 and 6 of information No. 5,406, and on counts 3 and 4 of No. 5,453. Counts 3 and 4 of No. 5,406 dismissed. Sentence consisting of the following fines was imposed: \$100 on the first count; \$100 on second count; \$50 on fifth count, and \$50 on sixth count of No. 5,406. Fifty dollars on first count, \$50 on second count of No. 5,453. Total fine of \$400 and costs in the two suits.

We regret that the judge's charge to the jury was not written up, and we are therefore unable to report the opinion of the Court.

#### INFORMATION NO. 5,406.

##### FIRST COUNT.

A shipment of extract labeled "Pure Concentrated Extract of Lemon Flavor, Imperial Extract Co., St. Louis, Mo.," was *adulterated*, to wit: That said bottles contained a liquid that was not an extract of lemon; but was a liquid artificially compounded, and contained no oil of lemon from which genuine extract of lemon is made, and other substances had been substituted in part for the article, and used in the manufacture thereof in the place of oil of lemon; and that said liquid was artificially colored whereby its inferiority was concealed, and that said liquid contained a poisonous and adulterated compound, to wit: methyl alcohol, or wood alcohol, which rendered said article injurious to health, and had been substituted in the manufacture of said liquid for ethyl, or grain alcohol.

##### SECOND COUNT.

Said liquid was *misbranded* in that the label thereon was false and misleading, so as to deceive and mislead the purchaser.

##### THIRD COUNT.

That on or about the 16th day of August, 1907, the defendant shipped a certain bottle labeled "Forbes Elegant Flavoring Extract, Highly Concentrated Lemon Flavor, for flavoring sauces, custards, jellies, ice cream, etc. Prepared by Forbes Bros. Co., St. Louis"; which said bottle was *adulterated*, in that it contained a liquid which was not a highly concentrated lemon flavor, and was not made from lemon, and was not made from oil of lemon, and that other substances had been substituted in part for the article, and used in the manufacture thereof in the place of oil of lemon, from which true lemon extract or lemon flavor is made, and that said liquid was artificially colored, whereby its inferiority was concealed.

##### FOURTH COUNT.

This count of the information covers the same extract as in the third count; but the charge is made that the bottle was *misbranded* in that the label was false and misleading, so as to deceive and mislead the purchaser.

##### FIFTH COUNT.

That on or about the 16th day of August, 1907, the defendant shipped a bottle labeled "Forbes Elegant Flavoring Extract, Highly Concentrated Strawberry, for flavoring sauces, custards, jellies, ice cream, etc. Prepared by Forbes

Bros. Co., St. Louis"; that contents of said bottle was *adulterated*, in that said bottle contained a liquid which was an artificial compound made of alcohol and other chemicals to imitate the flavor of strawberry, and was a substance substituted wholly for the article described by the label, and the contents of said bottle was artificially colored, whereby its inferiority was concealed.

##### SIXTH COUNT.

This count of the information covered the same shipment as that in the fifth count, the difference being that *misbranding* is charged, in that the bottle was labeled in a way that would mislead the purchaser.

#### INFORMATION NO. 5,453.

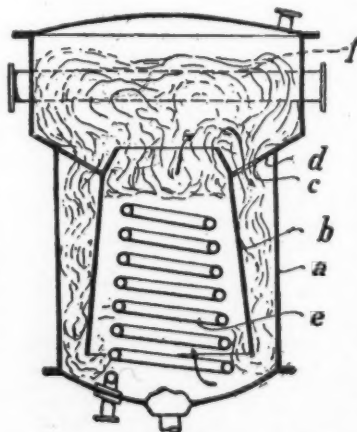
##### FIRST COUNT.

That on or about the 16th day of August, 1907, the Forbes Bros. Tea & Spice Co. unlawfully shipped a certain bottle labeled "Forbes Elegant Flavoring Extract, Highly Concentrated, Lemon Flavor, for flavoring sauces, custards, jellies, ice cream, etc. Prepared by Forbes Bros. Co., St. Louis, Mo." That contents of said bottle were *adulterated* and violated the Act of Congress of June 30, 1906, to wit: That said bottle contained a liquid that was not highly concentrated lemon flavor; and that the said liquid contained no oil of lemon, and that true lemon flavor or extract is made from, and contains oil of lemon, and that in the manufacture of said liquid a highly dilute alcoholic solution of citral had been substituted in part for the article, and that said highly dilute alcoholic solution of citral had been mixed and packed with the liquid contained in said bottle so as to reduce and lower and injuriously effect its quality and strength.

##### SECOND COUNT.

That said bottle was *misbranded*, in that the label thereon was false and misleading, so as to deceive the purchaser, in that said article was an imitation and offered for sale under the distinctive name of another article.

Apparatus for Manufacturing Soap.—E. Fischer, of 10, Hammerstrasse, Dresden, Saxony, through A. J. Boulton, of 111 and 112 Hatton-garden, E. C., has taken out a British Patent (No. 23,698 of 1908) for an invention as described in the following claim: (1) An apparatus for use in manufacturing resin soap in solid form having a boiling



vessel with a froth overflow, arranged directly above the same, from which overflow the froth is conducted back to the boiling chamber, characterized by a receptacle closed all round and divided by a horizontal wall in an overflow and a boiling chamber, connected together in such manner that the cooled froth is conducted round

the whole boiling chamber without interruption. (2) An apparatus as set forth in Claim 1, characterized by the vessel casing being corrugated, by means of which the cooling surface for the returning condensed froth is increased, and thus the return flow is accelerated in spite of the simultaneous heating of the material.



## THE ORANGE FLOWER FROM THE INDUSTRIAL POINT OF VIEW.

By H. DESGRAVES,

Chief of Bureau, Department of Agriculture, Haiti.

The hard struggle for existence creates in the mind of everyone the idea of work. It is just by work and chiefly by agricultural industry that we must endeavor to avert the danger that has already too long menaced us. So the Department of Agriculture, wishing to help some new plantations, and for once to insure the welfare of our farmers, has made a point of forwarding to several military commanding officers and also to many persons engaged in planting some cacao pods, cotton seeds, etc., with the express recommendation to look after the cultivation of them.

We trust that soon these new plantations will prove a source of relief to many families. There is no need to conjecture on the question of the result; the fact is well established that the peasant has not in him the innate habit of indolence. If the planter has in his possession the necessary implements, he takes readily to his labor, and his greatest passion is to care for the saplings, with a view to a good crop. He does well to think so, for the labor of the field is his only condition of life.

Therefore, in order to keep up his zeal, everyone should, according to the nature of the industry of his choice, do his best to get the most he can out of the scanty wares with which he comes into town. That will also redound to our profit. Out of these small commodities, let us consider the orange flower, which, distilled in large quantities, would bring prosperity to the manufacturer, if we take into account the large demand there is for it in the country. Yet I have often seen peasants compelled to throw away considerable quantities of flowers for which they could not find buyers. When altogether withered, flowers lose their aroma, and can be no longer of any use. Hence straitened circumstances are results of carelessness on the growers' part.

This is the reason I insist on the necessity there is of attending earnestly to these flowers. I feel confident that the public before which I am going to show the advantages to be derived from this vegetable product was far from surmising the extent of them. We know that by submitting any flower to the process of distillation, the water vapor that escapes from the head, falls into the recipient and carries along with it the principles of the flower thus treated.

In this case we have before us a distilled water from such a flower or another more or less used in medicine. Well, it is not only so for the article we have in mind. If we distill by the ordinary process, we have on the one hand some water distilled from the orange flower, which in technical language is called "hydrolat." The more flowers are used, the more aromatic the water will be. On the other hand, the operator, according to his experience or knowledge, obtains an essential oil in which the proportion of aroma greatly exceeds the distilled water. This oil itself has been given the name of *néroli*.

The etymology of this word is not quite certain. Some say that *néroli* comes from the celebrated Roman Emperor, Nero, whose love of perfumes was such that he had the ceilings of his dining rooms made to represent the heaven from which all kinds of perfumes rained night and day. Others thought that at first the oil had been manu-

factured by the Sabines, who, in order to distinguish it from the other perfumes of that epoch, called it *Néro*, which means strong.

But let us return to the principal aim of our subject. *Néroli* oil, on account of its strength, has the advantage of fetching a price twenty times higher than "hydrolat." With the rise in the exchange, as much as F. 1.50 is asked for about 20 drops, scarcely representing one gramme (15 grains). Judge from this all that is before the manufacturer, and how little he cares about it! *Néroli* oil is regularly sold at drug stores. It enters into different compounds, especially in perfumery. The part it plays in the preparation of eau de cologne, as well as in other toilet waters greatly used, is, rather important. This oil takes the place of "hydrolat" when the latter is scarce and the flower season has passed. Orange flower water is open to imitations. The leaves mixed with other ingredients help to practice this fraud.

In order to find out which is the pure one, that which in fact is the standard, it must be submitted (according to Ader) to the action of nitric acid, which will give to it a pink hue.

With Goble's solution the result is more promptly reached, and the roseate hue is more pronounced.

This solution is composed of:

Sulphuric acid .....	10 parts
Nitric acid .....	10 "
Plain water .....	30 "

This reagent has no action on imitation waters. The flowers of *citrus aurantium*, "sweet orange," are somewhat less appreciated than those of *citrus vulgaris*, "bitter orange," because the first give a less fragrant oil, which is called *Néroli* Portugal, or of second quality. The process to be employed for picking the flowers consists in spreading sheets of cloth under the trees in dry weather or two hours after sunrise, on account of the dew, which must always be avoided. After the dew has entirely disappeared, the branches are vigorously shaken to bring down the flowers. This operation may be repeated every two days during the entire flowering season.

These precautions are absolutely necessary, for the very good reason that if the trees are shaken immediately after raining or before the evaporation of the dew, the flowers would lose their aroma and fall into decay. It is when they are about to open that the flowers give out a sweeter perfume, and the yield of *néroli* oil is greater.

These considerations demonstrate that if manufacturers would only give some attention to this branch of business, that is to say, if they would establish special factories and thereby furnish the country with this highly delicious anti-spasmodic when taken in sugared water, at the proper time, the demand for flowers would be great, and I feel sure that the peasant, as well as the townsman, would marvel at the results.

Before the fire of July 5, last year, in which I lost the whole of my stock-in-trade, I paid great attention to distillation. There we have an industry suitable for Haiti, which abounds in flowers. That is what I understood about two years ago when I took part in the Saint Vincent Commercial Exposition, and there won a unique prize over several Haitians and foreigners.

I therefore give this cursory hint to the thoughtfulness of the energetic, and wish that for their own sake they may receive it favorably.

## TRADE NOTES

Mr. Arthur J. Seguin, of the American Floral Perfume Co., Toronto, made a Thanksgiving Day visit to New York. He is looking as bright and chipper as usual.

Mr. Edward Long, of the Sethness Co., Chicago, was in New York for a few days just before Thanksgiving.

Mr. C. E. Foote, of Foote & Jenks, Jackson, Mich., was a recent visitor to our office.

The factory of the Central Soap Co., Danville, Ill., has been sold to the Procter & Gamble Co., and will be dismantled.

Ben Elson, formerly with the National Aniline & Chemical Co., New York, sailed for Europe on *La Bretagne* Dec. 9. He will be gone some six weeks on business and pleasure, and we must await his return, of course, before we can obtain from him any announcement of his plans.

Headquarters for paste is on the southeast corner of William and John streets, New York City, at the offices of the Arabol Mfg. Co. Our readers should be especially interested in their "Tinnol" for pasting labels on tin, and there are different pastes for pasting labels on glass. They are prepared to meet any individual or specific wants, if you only state the case.

Joseph Campbell, Buffalo, N. Y., formerly manager of the Dingman Soap Co., died at his home on Nov. 29 at the age of 55.

Fire recently damaged the plant of the William Schields Manufacturing Company, St. Louis, Mo., soap makers. The loss is said to be about \$5,000.

We have received the following notice from the Ducas Chemical Company: "On November 1 the chemical department of Ducas & Co., was transferred to the Ducas Chemical Company, a corporation, organized under the New York State laws, with an authorized capital of \$100,000. The growth of the chemical department of Ducas & Co. made necessary larger facilities, and to provide them the department was transferred to the corporation as above noted. The personnel of the company remains the same as heretofore, and the manufacturing facilities are shortly to be considerably enlarged. Mr. B. H. Kamen, formerly of Fleurette, Inc., has joined the forces of Ducas Chemical Company, and will have charge of the sales department. The Ducas Chemical Company specialize in the manufacture of synthetic bases and semi-finished products suitable for the use of the manufacturing perfumer and toilet preparation maker. The general offices have been removed to larger quarters at No. 30 Church street, and the laboratories at No. 187 Pearl street have been considerably enlarged."

Mr. William A. Evans, of Magnus & Lauer, San Francisco, was a recent visitor. He reports a marked im-

provement in business during the latter half of this year; and in view of the return of his city to normal conditions, he anticipates a banner year in 1910. Their old headquarters in Battery street were wiped out in the earthquake, and they are now located in 129-141 Fremont street, where they manufacture flavoring extracts, fruit oils, and carry a large stock of essential oils, crude drugs, vanilla beans, etc. They are pushing IRONPORT, an extract used in making a temperance drink.

Nickerson Manufacturing Company, Malden, Mass.; to make mill soaps, pastes, polishes, etc. A. Nickerson is president. Andrew F. Fearn, treasurer, and, with A. M. Nickerson, these constitute the board of directors. The corporation is capitalized at \$20,000, with 200 shares at \$100 each.

Mr. Frederick W. Blocki, who is known to this industry principally through his interest in the firm of John Blocki & Son, Chicago, makers of perfumes. Mr. Blocki is a



MR. FREDERICK W. BLOCKI.

man of many friends and wide interests, for in addition to the firm above mentioned, he entered actively into the management of the following companies, in 1907, of which he is treasurer: Brennan Electric Construction Co., Blocki & Brennan Co., Blocki-Brennan Refining Co. He is also treasurer of the Cook County Democratic Committee, and the Rogers

Park Baseball and Amusement Association. In 1899 he entered the field of politics and was appointed superintendent of the Bureau of Maps of the City of Chicago. Six months later he was promoted to the position of Deputy Commissioner of Public Works, and in 1901 was advanced to the commissionership and reappointed in 1903. In 1905 he was nominated and elected city treasurer. What further political honors are in store for him no one can prophesy, but we would not be surprised to see him selected for the highest office within the gift of the citizens of Chicago.

Mr. Blocki was born in Chicago on Nov. 2, 1868, and was educated in the public schools and in the Chicago College of Pharmacy. He is a member of Golden Rule Lodge No. 726, York Chapter No. 148, St. Bernard Commandery No. 35, and Medinah Temple, Mystic Shrine. His clubs are the Chicago Athletic, South Shore Country, Chicago Builders, Iroquois, Germania, Schuetzenverein and Maennerchor, and Chicago Automobile; in the latter he is a director.

He married Miss Louise Woltersdorff of Chicago, Nov. 28, 1899, and has two children, Frederick A. L. and Ruth Louise.

Personally Mr. Blocki is of charming character, and though of serious enough mien, he has a droll sense of humor and wit that serves to lighten his leisure moments. Recently he sent to Captain S. E. Darby, associate editor of our Patent and Trade Mark Department, the following "pome" clipped from a drug journal:

Darby was a drug clerk,  
Darby is no more!  
What Darby thought was  
H<sub>2</sub>O,  
Was H<sub>2</sub>SO<sub>4</sub>.

to which Captain Darby fittingly replied as follows:

That drug clerk Darby should have known,  
At least that's what I think,  
That there are many better things,  
Than H<sub>2</sub>O to drink.

So if he made a bad mistake,  
And did not take "the same,"  
I fear he thereby proved himself,  
Unworthy of his name.

The Summit City Soap Company, Ft. Wayne, Ind., is planning the erection of a big brick addition to its plant. It will be of brick and steel, 105 x 65 feet in dimensions.

Incorporation papers have been issued the Con F. Drees Company, of Covington, Ohio, which has been organized to take over the business of manufacturing toilet soap and talcum powder, conducted during the past few years by Mr. Drees. The company will be capitalized for \$10,000. The incorporators are Con F. Drees, Dr. J. Kendell, J. H. Drees, W. V. Swisher and Con Neth.

Mr. William Orem and Miss Grace Louise Neal, of Gova, Md., were married in Baltimore on the 15th inst. Mr. Orem is Western representative of the Carr-Lowrey Glass

Co., of Baltimore, and has won a host of staunch friends in the trade. We join the chorus of congratulations that are being extended the happy couple.

Southern producers are demanding a duty of 20 per cent. on gum rosin, which has heretofore been admitted free, and the Treasury Department has decided to give the plan a trial. Soap manufacturers

oppose the imposition of the duty. Southern rosin interests claimed that under a wrong classification in the law, gum rosin, or rosin, from abroad, has been admitted free of duty, to the serious loss of the Southern trade.



CAPT. S. E. DARBY.

Herman C. G. Luyties, former president of the Sanitol Chemical Laboratory Company, St. Louis, Mo., is receiving the congratulations of friends owing to his personal vindication brought out in the audit of the company accounts. Charges of misappropriating funds had been made by stockholders of the company, twenty-eight in number, and a suit for receivership was brought and is now being heard in the U. S. Circuit Court, St. Louis.

B. D. Kribben, an expert accountant, testifying before Judge Williams, said he had audited the books of the company at the request of all the stockholders, including the plaintiffs making the charges against Mr. Luyties. As a result of this canvass, he said, every dollar received from any and all sources under Mr. Luyties' management had been accounted for.

The old board of directors was renominated at a recent meeting of the company, but they refused to permit their names to be considered, so an entirely new board and a new staff of officers were elected.

For alleged injuries caused by a nail, which had become imbedded in a cake of soap, Mrs. Annie E. Humby, of Baltimore, Md., has sued the Beaver Soap Company, of Ohio, for \$10,000 damages. The declaration states that Mrs. Humby bought the cake of soap in its original wrapper March 16 last, and was injured while using it in washing. Her hand was badly lacerated, it is alleged, by the nail.

An annual convention of the selling agents of the Remmers Soap Co., Cincinnati, O., was held at the company's offices early this month. Among those present were C. M. DeMott, New York; J. A. Lamoureux, Chicago; E. Chase Bryant, Cleveland; F. H. Langdon, Denver; M. N. Danheiser, Atlanta, Ga.; W. T. McNeal, Ludlow; Stanley Clague and H. W. Sehl, Chicago.

#### PUBLICATIONS, CIRCULARS, ETC.

H. Bronnley & Co., Ltd., soap makers in London, England, have sent us an extract of the judgment regarding shaving soap, in the case brought against them by the J. B. Williams Co., of Glastonbury, Conn. The latter concern contended that the use of a container for shaving soap by the Bronnley Co., similar to that used by itself, was unfair competition, and should be enjoined. The action was dismissed in the court of first instance, which action was upheld by the Master of Rolls.

Schimmel & Co., Miltitz (near Leipzig), Germany.—Semi-annual Report, October, 1909.—On account of the importance of this report we will defer an extended review till our January issue.

Rockhill & Vietor, New York.—Wholesale price list, December, 1909. Special attention is called to Petcheff's Otto of Rose, Givaudan's Synthetics, and Reichardt's seeds and crude drugs.

Chesapeake Glass Co., Baltimore, Md., send us their leaflet describing homeopathic vials for sampling perfumes. These vials are made in all sizes and in two styles—patent lip, and screw cap and shell.

Heine & Co., Leipzig, Germany.—Jubilee Price List. This is distinguished by a handsomely lithographed cover that is really a work of art.



MR. WILLIAM OREM.



Gedge-Gray Co., Hamilton, Ohio.—Catalogue of sifting and mixing machinery, especially adapted to the mixing of talcum powder.

### PURE FOOD AND DRUG NOTES.

In this section will be found all matters of interest contained in FEDERAL and STATE official reports, newspaper items, etc., relating to perfumes, flavoring extracts, etc.

#### STATE.

KANSAS.—Some one has contributed the following brilliant remark to the Bulletin of the State Board of Health for November: "This is an age of baths instead of perfumes." Assuming this to be true, for the sake of argument, it would follow that those who use perfumes do not bathe. We should be glad to learn whether the author of the statement quoted is a user of perfumed products in any form.

Label No. 3246.—SPURMAX. A preparation for making face lotion. Recommended for beautifying the complexion, whitening the skin without use of powder. Said to make sallow, dark, oily skin white; also good for blackheads, tan and freckles. Composed largely of magnesium sulphate, perfumed and tinted pink.

MICHIGAN.—Bulletins Nos. 165-166, Dairy and Food Department.

#### EXTRACTS.

No. 13024.—"Extract Lemon" (Royal Brand); mfr., A. B. Judson Co., Detroit.—Below standard in lemon oil.

No. 13136.—"Lemon Flavoring Extract." Mfr., Northrup, Robertson & Carrier Co., Lansing.—Below standard in oil.

No. 13182.—"Dr. Clark's Vanilla Flavor"; mfr., Union Extract Co., Kalamazoo.—Not pure vanilla.

No. 13243.—"Extract of Vanilla (Standard Brand)"; mfr., Reid, Henderson & Co., Chicago.—Sample is not a vanilla extract; improperly labeled.

No. 13276.—"Extract of Vanilla and Coumarin"; mfr., A. B. Judson Co., Detroit.—Not properly labeled as a mixture or compound.

No. 13278.—"Extract of Vanilla and Vanillin"; mfr., Horton, Cato Mfg. Co., Detroit.—Not properly labeled as a mixture or compound.

No. 13317.—"Extract of Pure Lemon (Sweet Violet Brand)"; mfr., Hall-Whitney Mfg. Co., Binghamton, N. Y.—Below standard in oil of lemon and citraldehyde; not up to U. S. P. requirements.

No. 13318.—"Compound Lemon Flavor (Monogram Brand)"; mfr., Hall-Whitney Mfg. Co., Binghamton, N. Y.—Improperly labeled.

No. 13319.—"Compound Vanilla Flavor (Monogram Brand)"; mfr., Hall-Whitney Mfg. Co., Binghamton, N. Y.—Not properly labeled.

No. 13339.—"Compound Vanilla Flavor, Vanilla and Coumarin (Hosmer Brand)"; mfr., Royal Tea Co., Chicago, Ill.—Not properly labeled.

No. 13340.—"Compound Lemon Flavor (Hosmer Brand)"; mfr., Royal Tea Co., Chicago, Ill.—Improperly labeled; contains no lemon oil.

No. 13343.—"Vanilla Simulated (Oakdale Brand)"; mfr., The Empire Mfg. Co., Detroit.—Contains coumarin; not properly labeled.

No. 13344.—"Lemo (Oakdale Brand)"; mfr., The Empire Mfg. Co., Detroit.—Not properly labeled.

No. 13447.—"Vanilla Flavor"; mfr., S. Gumpert & Co., 205 West street, New York.—Not a pure vanilla extract.—Contains coumarin and artificial color.

No. 13395.—"Compound Vanillin Flavor (Priscilla Brand)"; mfr., Franklin MacVeagh & Co., Chicago.—A properly labeled.

No. 13396.—"Terpenless Lemon Flavor (Priscilla Brand)"; mfr., Franklin MacVeagh & Co., Chicago.—A so-called terpenless extract, below standard in citral.

No. 13399.—"Vanillin and Coumarin (Priscilla Brand)"; mfr., Franklin MacVeagh & Co., Chicago.—Not properly labeled.

No. 13532.—"Artificial Strawberry Flavoring (Jewel Brand)"; mfr., Jewel Tea Co., Chicago.—Not properly labeled.

No. 13620.—"Strawberry Flavoring Powder"; jobber, Geo. A. Parker, 720 Chestnut street, Philadelphia.—An imitation flavor; not properly labeled.

No. 13659.—"Vanilla and Vanilline"; mfr., Imperial Tea Co., Detroit.—Not properly labeled.

No. 13714.—"Simulated Vanilla Flavor"; mfr., The Empire Mfg. Co., Detroit.—An imitation extract; not properly labeled.

No. 13615.—"Vanilla Flavoring (Acme Brand)"; Jobber, Lemon & Wheeler Co., Grand Rapids.—Not properly labeled as an imitation extract.

WYOMING.—Fifth Annual Report of Food Commissioner.

#### PROSECUTIONS.

Case No. 1621.

*State vs. The A. Colburn Co.*

Complaint filed June 21, 1909. Charge: Selling illegal vanilla. Pleaded guilty. Fined \$50 and cost.

Case No. 2138.

*State vs. The Midland Grocery Co.*

Complaint filed June 21, 1909. Charge: Selling illegal lemon extract. Pleaded guilty. Fined \$50 and cost.

*State vs. The Midland Grocery Co.*

Case No. 2265.

*State vs. The Midland Grocery Co.*

Complaint filed June 21, 1909. Charge: Selling illegal flavoring cinnamon. Case continued.

Case No. 2023.

*State vs. Moyune Tea Co.*

Complaint filed April 5, 1909. Charge: Selling illegal lemon flavor. Case continued.

Case No. 2024.

*State vs. Moyune Tea Co.*

Complaint filed April 5, 1909. Charge: Selling illegal vanilla flavor. Case continued.

Case No. 2260.

*State vs. Loverin & Browne Co.*

Complaint filed Sept. 3, 1909. Charge: Selling illegal lemon extract. Case continued.

#### ANALYSES.

2430.—Gillette's Double Extract Lemon, collected Aug. 10, 1909, from Cody Trading Co., Cody, Wyo.; E. W. Gillette, Chicago, Ill.—Lemon oil by vol., 6.2 per cent; not passed.

2362.—Vanilla Flavor; mfr., Rich Spice & Extract Co., Salt Lake City, Utah.—Alcohol 17.60 per cent.; contains vanillin, coumarin; caramel present; not passed.



2138.—Midland Pure Lemon Extract; Midland Grocery Co., Denver, Col.—Lemon oil, 4.2 per cent; low in lemon oil; illegal.

2142.—Red Cross Orange Flavoring Powder; H. S. Peterson & Co., Chicago, Ill.—Illegally labeled; no orange oil; not passed.

2143.—Red Cross Strawberry Flavoring Powder; H. S. Peterson & Co., Chicago, Ill.—Contains coal tar dye; not passed.

2209.—Pure Food Strawberry Extract; Chicago Extract Mfg. Co., Chicago, Ill.—Contains coal tar dye; not passed.

2260.—Loverin's Best Lemon Extract; Loverin & Browne, Chicago, Ill.—Lemon oil, 4.5 per cent; low in lemon oil; not passed.

2265.—Midland Flavoring Cinnamon; Midland Grocery Co., Denver, Col.—Contains coal tar dye; cinnamon oil, 1.31 per cent; low in cinnamon oil; not passed.

1621.—May Flower Vanilla; The A. Colburn Co., Philadelphia, Pa.—Alcohol, 20 per cent; total solids, 15.34 per cent; vanillin, .05 per cent; sucrose, 12.41 per cent; below standard; illegal.

2023.—Moyune Lemon Flavor; Moyune Tea Co., Fremont, and So. Omaha, Neb.—Alcohol, 32.40 per cent; lemon oil, 0.44 per cent; below standard; not passed.

2024.—Moyune Vanilla Flavor; Moyune Tea Co., Fremont and So. Omaha, Neb.—Alcohol, 7.34 per cent; total solids, 9.20 per cent; vanillin, .05 per cent; coumarin present; caramel present; sucrose, 6.17 per cent; not a pure vanilla extract; below standard; not passed.

1519.—Huile D'Olive Verge, sent in March 28, 1908, by Orin Merc. Co., Orin Junction, Wyo.—Specific gravity at 15 degs. C., .9223; refractive index at 15 degs. C., 1.4741; Bechi test for cottonseed oil, positive; Halphen test for cottonseed oil, positive; old stock; not passed.

#### FEDERAL.

(N. J. 115.)

(Imitation Colored with a Coal-Tar Dye.)

In accordance with the provisions of section 4 of the Food and Drugs Act of June 30, 1906, and of regulation 6 of the rules and regulations for the enforcement of the act, notice is given that on the 3d day of June, 1909, in the United States Circuit Court for the Eastern District of Louisiana, in a criminal prosecution by the United States against the Nicholas Burke Company, Ltd., a corporation of New Orleans, La., for violation of section 2 of the aforesaid act, in shipping and delivering for shipment from Louisiana to Mississippi an adulterated and misbranded lemon extract, the said Nicholas Burke Company, Ltd., entered a plea of guilty, whereupon the court imposed upon it a fine of \$10.

The facts in the case were as follows:

On February 21, 1908, an inspector of the United States Department of Agriculture purchased from the firm of Van Cleave Brothers, Ocean Springs, Miss., a sample of lemon extract labeled, "Momus N. B. Co., Ltd., Double Extract Lemon for Cakes, Pastry, etc. Nicholas Burke Co., Ltd., New Orleans, La.," which had been manufactured and shipped by the Nicholas Burke Company, Ltd., from New Orleans, La., to the said firm on or about June 3, 1907. The sample was subjected to analysis in the Bureau of Chemistry of the United States Department of Agriculture, and the following results obtained and stated:

Specific gravity at 15.5 degs. C.....	0.99153
Alcohol by volume (per cent.).....	7.64
Solids, in extract (gram per 100 cc.).....	.87
Lemon oil by polarization.....	None.
Lemon oil by precipitation.....	None.
Citral (per cent. by weight).....	.02
Color, coal tar dye.	

In the opinion of the Department of Agriculture, lemon extract is the flavoring extract prepared from oil of lemon or from lemon peel, or both, and contains not less than 5 per cent. by volume of lemon oil. It was evident that the product was both adulterated and misbranded within the meaning of sections 7 and 8 of the act; adulterated because it contained little or no lemon oil and because it was an imitation extract colored with a coal-tar dye to give it

the color of genuine lemon extract, thereby concealing inferiority; and misbranded because labeled "Double Extract Lemon," whereas it contains little or no lemon extract.

On March 23, 1909, the facts were reported by the Secretary of Agriculture to the Attorney-General and the case was referred to the United States Attorney for the Eastern District of Louisiana, who filed information against the Nicholas Burke Company, Ltd., with the results hereinbefore stated.

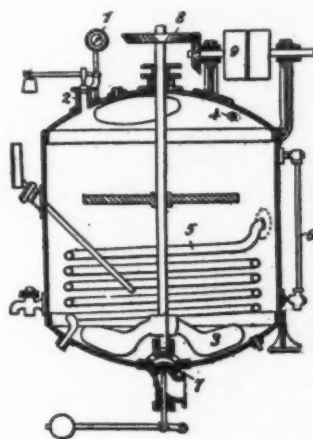
H. W. WILEY,  
F. L. DUNLAP,  
GEO. P. McCABE,

Board of Food and Drug Inspection.

Approved:

JAMES WILSON, Secretary of Agriculture.  
WASHINGTON, D. C., Nov. 20, 1909.

Saponifying Fatty Materials.—By British Patent No. 9758 of 1908, P. A. Barbé, F. Garelli and G. de Paoli, all of 9, Via Due Macelli, Rome, protect the following



improvements in the saponification of fatty materials by means of liquid ammonia under pressure, and in apparatus to be employed therein. Saponification of fats of any nature and origin by emulsifying the same with about 0.5 per cent. of ammonia (which latter in the process has a catalytic function), with steam at about 130 degs. to 160 degs. C., and a pressure of 3 to 6 atmospheres during about eight

hours, and then immediately separating the very pure concentrated glycerine waters of 6 to 7 degs. Bé. Also the digester for effecting the above described operations, as illustrated.

SOAPS OF EVERY KIND; APPARATUS AND PROCESS FOR MAKING —. L. Rivère. Third addition, dated Feb. 18, 1909, to Fr. Pat. 374,179, Jan. 12, 1907 (see this J., 1907, 769, 881; 1909, 317).

Claim is made for the use of sodium bisulphate (preferably that obtained as a by-product in the manufacture of nitric acid) for the liberation of fatty acids from insoluble and other soaps. It is stated that the fatty acids have a higher melting point and less color than those liberated by a mineral acid.—C. A. M.

Consul Arthur Garrels, of Zanzibar, reports that, according to an East African newspaper, the chiefs and people of Uganda are becoming enthusiastic in the domestication of bees for the production of wax, one of the few products that can be profitably exported from the Nile country. As a result of the work of instructors sent to teach bee keeping, bees are being largely domesticated by the natives, as many as 8,000 hives having been erected in the eastern province alone, 2,000 hives being already occupied, and there is reason to believe that within another year beeswax will be among the staple exports of Uganda. At Entebbe it is worth about 22¼ cents per pound.

**PATENTS, TRADE MARKS, ETC.**

 VIOTTO 39199	 27571	 CANESH 32425	 37854
 39365	 39426	 39735	 42435
 ZENOBIA 44459	 Edwards 43605	 44198	 44681
 43239	 44499	 44626	 43774

**NOTE TO READERS.**

This department is conducted under the general supervision of Samuel E. Darby, Esq., Patent and Trade-Mark Attorney, 220 Broadway, New York, formerly Chief Clerk and Examiner, U. S. Patent Office. This report of patents, trade marks, labels and designs is compiled from the official records of the Patent Office in Washington, D. C. We include everything relating to the four co-ordinate branches of the essential oil industry, viz.: PERFUMES, SOAP, FLAVORING EXTRACTS and TOILET PREPARATIONS.

The trade marks illustrated are described under the heading "Trade Marks Applied For," and are those for which registration has been allowed, but not yet issued. All protests for infringement, etc., should be made promptly to the Commissioner of Patents, Washington, D. C.

All inquiries relating to patents, trade marks, labels, copyrights, etc., will receive Mr. Darby's attention if addressed to

PATENT AND TRADE MARK DEPT.  
Perfumer Pub Co. 100 William St., New York.

**PATENTS GRANTED.**

941,158.—SUBSTITUTE FOR SOAP FOR WASHING, CLEANING, AND BLEACHING PURPOSES.—Paul Mausolf, Frankfort-on-the Main, Germany, assignor to Roessler & Hasslacher Chemical Co., New York, N. Y., a corporation of New York. Filed Jan. 18, 1908. Serial No. 411,528.

1. A substitute for soap for washing, cleaning and bleaching purposes consisting of a mixture of a harmless peroxidized compound and soluble inorganic alkaline material.

2. A substitute for soap for washing, cleaning and bleaching purposes consisting of a mixture of harmless peroxidized compound and alkaline material comprising borax.

3. A substitute for soap for washing, cleaning and bleaching purposes consisting of a mixture of harmless peroxidized compound, soda and borax.

4. A substitute for soap for washing, cleaning and bleaching purposes consisting of a mixture of sodium perborate and alkaline material comprising borax.

5. A substitute for soap for washing, cleaning and bleaching purposes consisting of a mixture of sodium perborate, soda and borax.

941,434.—HAIR TONIC.—Constas Tsorones, Minneapolis, Minn. Filed April 24, 1909. Serial No. 492,037.

A hair tonic consisting of corrosive sublimate, quinin sulphate, chloral hydrate, tincture of rhatany, nitric acid, alcohol and water in the proportions stated.

942,538.—ANTISEPTIC SOAP.—Wallace A. Beatty, New York, N. Y., assignor to Robert W. McCulloch, trustee, New York, N. Y. Filed March 1, 1907. Serial No. 359,994. Renewed May 7, 1909. Serial No. 494,585.

1. An antiseptic soap combining a saponaceous element and tetra-brom-cresol.

2. An antiseptic soap combining a saponaceous element and a compound of bromin and cresol, which compound contains substantially 75 per cent. of bromin.

3. A detergent combining a saponaceous element and an antiseptic tetra-brom-cresol as its base.

**TRADE MARKS REGISTERED.**

75,837.—Hair Dye.—Charles Walter Blackburn, Petaluma, Cal.

Filed May 12, 1909. Serial No. 42,379. Published September 21, 1909.

75,866.—Cream Dentrifice.—Maphis Chemical Company, Inc., Strasburg, Va.

Filed June 9, 1909. Serial No. 42,913. Published September 21, 1909.

75,881.—Antiseptic Powder.—Sharp & Dohme, Baltimore, Md.

Filed June 23, 1909. Serial No. 43,202. Published September 21, 1909.

75,893.—Perfumery.—Sal. Hudes, New York, N. Y.

Filed August 19, 1907. Serial No. 29,474. Published September 21, 1909.

75,894.—Mouth Washes and Liquid Dentrifices.—Fritz Kleinsorgen, Elberfeld, Germany.

Filed February 28, 1906. Serial No. 17,399. Published August 24, 1909.

75,898.—Soap.—Burckhardt & Co., Cincinnati, Ohio.

Filed August 9, 1909. Serial No. 44,042. Published September 21, 1909.

75,905.—Soap.—Robert A. Jewett, Boston, Mass.

Filed July 13, 1909. Serial No. 43,491. Published September 21, 1909.

75,910.—French Olive Oil.—The Scuddersgale Grocer Co., St. Louis, Mo.

Filed May 24, 1909. Serial No. 42,638. Published September 21, 1909.

75,918.—Italian Olive Oil.—Austin, Nichols & Co., New York, N. Y.

Filed July 12, 1909. Serial No. 43,486. Published September 28, 1909.

75,953.—Face and Scalp Lotions.—Charles M. Athey, Baltimore, Md.

Filed August 6, 1909. Serial No. 44,004. Published September 28, 1909.

75,954.—Toilet Powders and Bath Powders.—Batcheller Importing Co., New York, N. Y.

Filed July 24, 1909. Serial No. 43,764. Published September 28, 1909.

75,960.—Mouth Wash.—Edwin Cudlipp, New York, N. Y.

Filed July 1, 1909. Serial No. 43,358. Published September 28, 1909.

75,962.—Denatured Alcohol.—The Hammond Distilling Co., Hammond, Ind., and Chicago, Ill.

Filed July 2, 1909. Serial No. 43,373. Published September 28, 1909.

75,983.—Ointments, Germicides, Liniments, and Hair Tonics.—Rockwood Chemical Company, Boston, Mass.

Filed November 12, 1908. Serial No. 38,606. Published September 21, 1909.

76,091.—Soap for Toilet, Laundry, and General Purposes.—The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kan., and New York, N. Y.

Filed July 31, 1909. Serial No. 43,902. Published October 12, 1909.

76,092.—Soap for Laundry and General Purposes.—The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kan., and New York, N. Y.

Filed July 31, 1909. Serial No. 43,907. Published October 12, 1909.

76,093.—Soap for Laundry use.—The Procter & Gamble Company, Ivorydale and Cincinnati, Ohio; Kansas City, Kan., and New York, N. Y.

Filed July 31, 1909. Serial No. 43,908. Published October 12, 1909.

76,105.—Soaps and Soap Powders.—Colgate & Co., Jersey City, N. J., and New York, N. Y.

Filed June 19, 1909. Serial No. 43,115. Published October 12, 1909.

76,109.—Liquid Dentrifice and Antiseptic.—Eleto Company, New York, N. Y.

Filed December 3, 1908. Serial No. 39,066. Published October 12, 1909.

76,130.—Soap.—Joel F. Shipley, Boggy Depot, Okla.

Filed June 21, 1909. Serial No. 43,142. Published October 12, 1909.

#### TRADE MARKS APPLIED FOR.

10,195.—Fabrikation Für Lessive Phenix, Patent J. Picot, Paris; L. Minlos & Co., Koln-Ehrenfeld, Germany. Filed July 12, 1905.—Washing Powder and Soap.

27,571.—Pope & Wilson, Chicago, Ill. Filed May 22, 1907.—Lotion and Face Cream.

32,425.—Meyer Brothers Drug Co., St. Louis, Mo. Filed Jan. 25, 1908. (Used ten years.) The cross is painted in red.—French Olive Oil.

33,255.—Eleanor Griffith Phibbs, London, England. Filed March 9, 1908.—Medicated Toilet Waters, Creams, Lotions, Toilet Oils, Wrinkle Plasters, Medicated Dentrifices, Medicated Eye-Drops, Medicated Hair-Stains, Medicated Toilet and Medicated Face Rouges.

37,854.—Barton & Guestier, Bordeaux, France. Filed October 7, 1908.—Olive Oil.

39,199.—H. Bronnley & Co., Ltd., London, England. Filed December 9, 1908.—Perfumes, Face Powders, Face Cream.

39,365.—The Imperial Chemical Mfg. Co., New York, N. Y. Filed December 16, 1908. (Used ten years.)—Toilet Preparations, namely: Hair Regenerator, Hair Remover, Hair Tonic, Shampoo, Cream for the Skin, Creamy Emulsion for the Skin of the Face, Neck and Hands, and Rouge for the Cheeks and Lips.

39,426.—Henry Solomon Wellcome, London England. Filed December 18, 1908.—Dentrifice in solid form, etc.

39,735.—Campbell, Holton & Co., Bloomington, Ill. Filed January 6, 1909.—Olive Oil, Extract of Vanilla, etc.

42,435.—Wellman, Peck & Co., San Francisco, Cal. Filed May 15, 1909.—Food Flavoring Extracts.

43,239.—Samuel A. Magee, Bowling Green, Mo. Filed June 25, 1909.—A Washing Compound.

43,328.—Francois Fues, New York, N. Y. Filed June 30, 1909.—Perfumes, Toilet Water, Oriental Water, Toilet Cream, Face Cream, Skin Enamel, Hair Tonic, Scalp Water, Hair Lotion, Skin Lotion, Toilet Powder, Talcum Powder, Face Powder, Hand Powder, Sachet Powder, Liquid Dentrifices, Tooth Powder, Massage Liquid, Ointments and Liniments.

43,605.—The Williams Edwards Co., Cleveland, Ohio. Filed July 17, 1909. (Used ten years.)—Flavoring Extracts.

43,774.—Minnesota Mercantile Co., Stillwater, Minn. Filed July 24, 1909.—Flavoring Extracts.

44,198.—Girard A. Mavon, Chicago, Ill. Filed August 18, 1909.—Soap and Scouring and Washing Powders.

44,459.—W. F. Charles, Loughborough, England. Filed August 31, 1909.—Perfumery, Sachet, Toilet Powder, Toilet Water, Bath Powder, Tooth Powder, Tooth Paste, Toilet Creme, Hair Pomade, and Shampoo Powders.

44,499.—H. T. Cottan & Co., Ltd., New Orleans, La. Filed September 2, 1909.—Soap.

44,626.—The Holbrook Mfg. Co., New York, N. Y. Filed September 10, 1909.—Scouring Soap and Cleaning Powder used for detergent and polishing purposes.

44,681.—Lockwood, Brackett & Co., Boston, Mass. Filed September 14, 1909.—Olive Oil and Orange Flower Water suitable for flavoring foods.

Cement from Soap Waste.—A striking instance of the important bearing of applied science to industry has recently been furnished at the factory of one of the largest Canadian soap manufacturers. In preparing soap an immense quantity of various residues accumulate. Some of these can be turned to commercial advantage, such as glycerine, but others have hitherto resisted any profitable application. Among the latter is carbonate of lime, which is produced in large quantities. In the course of prolonged experiments in the chemical laboratory, searching for some means of utilizing this waste, the manufacturers are reported to have succeeded in discovering that it could be profitably employed in the making of Portland cement, and the process being commercially applicable, a large factory as an adjunct to the soap refineries is being erected, capable of turning out over 400 tons of cement per week.

SOAP.—Manufacture of ——. J. E. Jaekels, Tottenham, England, Patent 26,857, Dec. 10, 1908. A hot mixture of clarified tallow and cottonseed oil is treated with caustic soda solution of about 22 degs. B., and the resulting mass cooled, broken up, and boiled with water until of the required consistence. It is then incorporated with a powdered or granular pumice stone, and scent, glycerin and coloring matter added if desired. An addition of melted rosin may also be made to the fluid tallow prior to the treatment with caustic soda.—C. A. M.



## FOREIGN CORRESPONDENCE AND MARKET REPORT

### BRITISH INDIA.

#### FACE PREPARATIONS IN GENERAL USE IN BURMA.

Vice-Consul John H. Monson, of Rangoon, reports that the Burmese ladies use a considerable amount of face cream. It is prepared from the bark of a tree locally grown, ground to a pulp and mixed with a little water to permit rubbing on the face. It is also used on babies, and is supposed to contain medicinal properties, being found useful as an application for prickly heat, rashes, etc. A good per cent. of the population of Burma is therefore fond of a face preparation, and there seems to be no reason why such products should not find a ready sale here.

### SPAIN.

#### TOILET PREPARATIONS IN GENERAL USE IN MALAGA.

Consul Edward J. Norton furnishes the following information relative to the trade in toilet articles in Malaga, Spain:

"Judging from the display of toilet waters, perfumes, face creams, toilet soaps and similar goods seen in the shops of Malaga, the imports must be fairly heavy. A great variety of toilet preparations are carried in stock by perfumers, barbers and dry goods stores, but, as the customs returns do not show the value of imports, it is impossible to give an aggregate of this trade.

"France and Germany supply the market. The bulk of purchases are made through wholesale houses in Barcelona and Madrid, which act as distributors for the manufacturers or are sole agencies. From time to time the territory is covered by French or German salesmen, who report on trade conditions, and who see that the Spanish agents are pushing the goods and are in touch with the market.

"Little advertising is done, and it would seem that certain articles, especially new goods, could be made extremely popular by carefully planned advertising in the Spanish weeklies and in periodicals devoted to fashions. Sample advertising is carried on here to a very limited extent, although samples are eagerly sought for, so that in certain goods this method of creating a demand might give good results.

"There is a good opportunity here for American products. The only American toilet preparation now sold in Malaga is a widely advertised shaving soap. This soap, although in the market but a short time, is being sold in steadily increasing quantities. Massage creams are not used by the local barbers, but an active campaign would undoubtedly bring the goods into use.

#### DUTIES AND CORRESPONDENCE.

"The duties on toilet preparations are as follows, per kilo (2.2 pounds): Toilet soaps, perfumed, 46.3 cents; toilet or medicinal soaps, not perfumed, 19.3 cents; cosmetics, 46.3 cents; perfumery, with alcohol base, 77.2 cents; perfumery and essences, not otherwise specified, 46.3 cents. Toilet and massage creams are included in the last-named classification. Duties are collected on the net weight of these goods, which includes the articles imported together with boxes, cartons or wrappings. In the case of perfumery and toilet preparations the net weight is arrived

at by weighing the goods in jars, bottles, or flasks, together with the cartons or wooden boxes containing dozen or half-dozen lots. The gross weight of the goods and packing will be reduced by 25 per cent., thus giving the legal net weight of the importation.

"All correspondence with local dealers should be in Spanish. Advertising matter is useless unless printed in Spanish, and the directions for using toilet preparations should be also in Spanish."

### JAPAN.

#### COMPETITION OF LOCAL WITH FOREIGN TOILET PREPARATIONS.

Vice-Consul-General E. G. Babbitt, of Yokohama, in answer to an inquiry, furnishes the following information concerning the outlook for American toilet articles in Japan:

"There are a great number of Japanese toilet preparations on the market, and some of them of such merit as to have a considerable sale among the foreign residents of Japan. There is quite an export trade also. While American goods would have some sale among the Japanese, particularly among those already acquainted with them, the trade would be largely limited to the foreign residents and transients, as it is in the foreign drug stores and dealers in foreign articles that such goods are usually handled, seldom or never in purely Japanese drug and dry goods establishments.

"The importation of toilet articles is decreasing, probably owing to the advance in the manufacture in Japan. It is to be regretted that so many articles are included in the one heading by the customs, making it impossible to give any particulars concerning special articles.

#### IMPORTS AND EXPORTS.

"The following statement shows the imports of toilet and perfumed waters and of toilet soaps from the principal countries:

Countries.	Toilet and perfumed waters, etc.	Toilet soaps.
United States .....	\$22,847	\$75,486
France .....	108,831	45,743
Germany .....	47,291	75,405
United Kingdom .....	47,060	32,668
Austria-Hungary .....	1,912	23,050
All other countries .....	11,607	5,256
Totals .....	\$240,149	\$197,608

"During the year 1908 the following Japanese preparations were exported, to the amounts given: Toilet and perfumed waters and hair oil, \$93,002; tooth powder and pastes, \$52,776; hair cosmetics, \$18,780; toilet powders, \$42,473; toilet soaps (1,267,476 dozen), \$275,929; all other preparations, \$55,720; total, \$538,680.

"The exports to the United States, presumably largely for Japanese residents, was small, the greater portion going to China, Korea and the Kwantung Province." [A list of druggists and dry goods and fancy goods dealers, together with the addresses of trading companies dealing in American products generally, transmitted by Vice-Consul-General Babbitt, are on file in the Bureau of Manufactures.]

### SIAM.

#### FOREIGN DRUGS AND MEDICINES IN USE IN THE KINGDOM.

Vice-Consul-General Carl C. Hensen, of Bangkok, furnishes the following report covering the trade in druggists' supplies in Siam:

Excluding Hongkong and Singapore, which are chiefly transshipment ports, the United Kingdom and Germany supply the larger portion of druggists' goods and toilet articles. The following statement shows the imports of drugs and medicines into Siam during the fiscal year 1907-1908 and in 1908-1909:



Whence imported.	1907-8.	1908-9.
Hongkong .....	\$96,691	\$131,646
Singapore .....	54,977	60,274
United Kingdom .....	70,288	52,144
Germany .....	76,196	48,225
United States .....	5,640	8,095
All other countries .....	82,236	58,160
Totals .....	\$386,028	\$358,544

## THE DOMESTIC MARKET.

There is practically no difference between conditions in the essential oil industry and its branches and other lines of trade. The dying year sees manufacturers taking account of a year's work that has been, on the whole, rather satisfactory, and the general outlook for 1910 is inspiring.

The situation in Messina oils is unsettled; in the case of lemon on account of the tightening of the lines with respect to quality; and in the case of orange, with respect to the doubt existing as to the rate of duty.

The peppermint situation is still "hoss an' hoss," though spot prices are still over \$2.

## BEANS.

Developments in Mexico confirm previous reports regarding the size and quality of the crop. The yield of

cuts is not expected to go over 50,000 lbs., and of whole beans 90,000 lbs., as against 100,000 and 200,000 lbs., respectively, for the previous crop. The yield of beans classified as *prime* is not expected to be more than half as large as last year. Under these conditions those who pin their faith to Mexican beans will have to pay more for their supply.

Bourbons are slightly easier, though many interpret the slight recession in prices as manipulation on the part of leading operators abroad.

## SOAP MATERIALS.

Tallow, city, .06½ (hhds.); country, .06¼.

Grease, brown, .05¾; yellow, .06¼.

Cottonseed Oil, crude, tanks, 6.50@6.60; summer yellow, prime, 7½@7¾.

Cocanut Oil, Cochin, .09¾@1.10; Ceylon, .09@.09¼.

Olive Oil, in bond, .80@.90.

Olive Oil, Foots, prime, .07.

Palm Oil, Lagos, .06½; red, prime, .06¼.

Soya Bean Oil, .06½@.06¾.

Chemicals, borax, .04½; caustic soda, 80 p. c. basis of 60 p. c., \$1.90.

Rosin, per 280 lbs., 4.35@7.15.

Almond, Bitter.....per lb....	\$3.50	Geranium, Turkish .....	\$2.75	Savin .....	\$1.40
" " F. F. P. A. ....	4.50	Ginger .....	4.50	Spearmint .....	1.85
" Artificial .....	.85	Gingergrass .....	1.35	Spruce .....	.45
" Sweet, True.....	.55-.60	Hemlock .....	.55	Tansy .....	3.50
" Peach-kernel .....	.30-.35	Juniper Berries, twice rect....	1.30	Thyme, red, French.....	1.10
Amber, Crude.....	.13	Kananga, Java .....	4.00	" white, " .....	1.30
" Rectified .....	.20	Lavender, English .....	7.00	Vetivert, Bourbon .....	8.50
Anise .....	1.15	" Cultivated .....	2.75	" Indian .....	42.00
Aspic (Spike) .....	1.25	" Fleurs, 28-30% .....	2.50	Wintergreen, artificial .....	.38
Bay, Porto Rico.....	3.50	Lemon .....	.85	" genuine .....	4.25
Bay .....	2.10	Lemongrass .....	.85	Wormwood .....	6.50
Bergamot, 35%-36%.....	3.75	Limes, expressed .....	2.00	Ylang-ylang .....	50.00-65.00
Birch (Sweet) .....	1.80	" distilled .....	.80		
Bois de Rose, Femelle .....	4.50	Linaloe .....	2.90		
Cade .....	.20	Mace, distilled .....	.80		
Cajeput .....	.60	Mustard, natural .....	4.10		
Camphor .....	.12	" seed, gen.....	8.50		
Caraway Seed .....	1.30	" artificial .....	2.00		
Cardamon .....	18.00	Myrbane, rect. ....	.12		
Carvol .....	2.45	Neroli, petale.....	80.00-90.00		
Cassia, 75-80%, Technical.....	1.00	" artificial .....	17.00		
" Lead free .....	1.30	Nutmeg .....	.90		
" Redistilled .....	1.60	Orange, bitter .....	2.40		
Cedar, Leaf .....	.50	" sweet .....	2.25		
" Wood .....	.22	Origanum .....	.40		
Cinnamon, Ceylon.....	6.50-12.00	Orris Root, concrete .... (oz.)	3.50-4.50		
Citronella .....	.20	" " absolute .....	28.50-32.00		
Cloves .....	.80	Patchouly .....	4.75-5.50		
Copaiba .....	1.25	Pennyroyal .....	2.00		
Coriander .....	6.00-13.00	Peppermint, W. C. ....	2.15		
Croton .....	.75	Petit Grain, American.....	4.50		
Cubebs .....	2.75	" " French .....	6.00		
Erigeron .....	1.70	Pimento .....	2.25		
Eucalyptus, Australian, 70%...	.50	Rose .....	5.00-5.50		
" American .....	.60	Rosemary, French.....	.80		
Fennel, Sweet .....	1.20	" Trieste .....	.70		
" Bitter .....	.75	Safrol .....	.50		
Geranium, African .....	4.00	Sandalwood, East India.....	3.50		
" Bourbon .....	3.50	Sassafras, natural .....	.60		
" French .....	11.00	" artificial .....	.35		

## BEANS.

Tonka Beans, Angostura.....	1.25
Surinam .....	.55
Para .....	.50
Vanilla Beans, Mexican .....	4.00-5.00
" " " Cut ...	3.00
" " Bourbon .....	3.00-3.75
" " Tahiti .....	1.00

## SUNDRIES.

Ambergris, black .....	(oz.) 20.00
" gray.....	" 25.00
Civet, horns .....	" 1.75-1.85
Cologne Spirit .....	2.64-3.25
Cumarin .....	3.30
Heliotropine .....	1.85
Musk, Cab., pods.....	(oz.) 8.00
" " grain .....	" 15.00
" Tonquin, pods.....	" 18.00
" " grain.....	" 22.00
" Artificial, per lb.....	1.50
Orris Root, Florentine, whole .....	.10
Orris Root, powdered and granulated .....	.13
Talc, Italian .....	.01¼-.01¾
Terpineol .....	.35-.45
Thymol .....	1.85
Vanillin .....	(oz.) .33-.35

## SIMPLE PROCESS OF EXTRACTING OIL OF ORRIS.

BY G. ROBERT.

The oil of orris was formerly extracted from the powder of the orris of Florence (also grown in France in the department de l'Ain) by distillation with steam. The operation was protracted and delicate and the apparatus employed suffered rapid deterioration, owing to the action of the fatty acids, carried over (cerotic acid, myristic acid, etc.) which attacked the heated metals. It was really necessary to keep the water in the refrigerator at such a temperature that the orris butter thus made would run into the receiver and not obstruct the worm.

We speak of this manipulation as an obsolete process, but it has not altogether fallen into disuse, and there is a regular sale for the orris "butter," a large number of concerns will know nothing of replacing this method by that of a more modern product, especially one obtained by means of volatile solvents.

It is known that this process is based on the ready solubility of essential oils in the light derivatives of petroleum (rectified essence, or ether) or the sulphides of carbon, chloride of ethyl, etc. The base of the oil is systematically washed in a series of receivers, arranged in battery, by the solvent selected, which is gradually enriched with the odoriferous oil; the solvent passes a first time over a powder already previously washed several times, then over a powder less poor and finally over a powder not having been subject to any previous treatment.

The liquid thus charged with the aromatic product, reaches the alembic, where it is exposed to evaporation. The solvent is driven off, either in vacuo or with heating, which is of no importance, because we always select a volatile vehicle; there remains in the bottom of the alembic a resinoid which we remove for purification by alcohol.

It contains, as a fact, the principles of a resin or wax, soluble in the vehicle employed, but insoluble in alcohol and useless in perfumery. After this washing and evaporation of the alcohol, there remains a very odoriferous resinoid of orris, and, in addition to this, a good fixer, by reason of the large proportion of slightly volatile constituents it contains. It is, to a certain extent, an extra concentrated infusion of orris (absolute) and which can be used in every instance where the old formulæ indicate the use of the old and excellent alcoholate.

If we then rectify this thick product, resembling varnish, we obtain irone, or absolute essential oil of orris, which replaces advantageously the orris butters or preparations distilled from this concrete oil.

But this modern process has also a number of disadvantages, of which the principal one is the excessive expense of the necessary apparatus, and the great danger of fire, inseparable from the manipulation of large bodies of the inflammable petroleum derivatives. Theoretically, as it should all be accomplished in a closed vessel, or in a partial vacuum, there should never be any dangerous leak. But in practice it is not so, and the presence of a large quantity of inflammable material in a manufactory, where all the stock generally consists of valuable and combustible products, entails a considerable responsibility on the manufacturer and a proportionate increase in the insurance premiums against fire, accident, etc. Consequently, manufacturers, possessing installations of this character, will be

agreeably surprised to learn of the creation of new products, readily dissolving fatty substances and essential oils, offering all the advantages of the light essence of petroleum and unflammable.

Dichlorethylene and trichlorethylene come nearest, owing to their boiling point, 55 degs. and 88 degs. C. (131 degs. and 190 degs. Fahr.), to the products used until now, and are in addition non-combustible and not very odorous, allowing of their use again for the mixtures, the treated orris powders. We can only reproach them for their tendency to set free, in the presence of moisture, traces of hydrochloric acid. But this drawback disappears, it seems, in well prepared products, and these new solvents are employed, nowadays, in all the German factories.

One of the greatest advantages of dichlorethylene is that it can be used without any special apparatus. The perfumer who has employed, either in soap, or in ordinary rice powder, the common qualities of orris powder, can himself extract his oil of orris, under favorable conditions of cost, without seeking to extract the whole of the powder contained therein. The imperfectly washed powder he can use, after all, for his second qualities.

He need treat only small quantities; he simply mixes, volume for volume, the powder and the dichlorethylene, and transfers the decoction obtained to a rapid exhaust filter. The powder will be dried rapidly and the evaporated liquid leave deposited a pure orris resin, which is simply placed in alcohol and which, after filtration, yields a concentrated infusion, which could hardly have been obtained by the ordinary method and which would come to a higher price because of the appreciable loss of alcohol and the lack of value of the powder washed in alcohol.

If we are handling large quantities, we may, by a special arrangement, recover the dichlorethylene used, or we can use preferably trichlorethylene, which is more readily condensed without loss.

The recovered solvent can be used for future operations.

It may be mentioned, moreover, that the orris powder treated, if it has lost some of its odoriferous power, has gained in whiteness to an extent that permits of its employment, in larger proportions, in certain white or faintly colored mixtures.—*Parfumerie Moderne*.

**CLEANSING CREAM OR WHITE SOFT SOAP.**—By British patent No. 2,890 of 1909, E. Manley, 2, Jubilee-terrace, High Ackworth, nr. Pontefract, Yorks, protects a new kind of soft soap, white as cream, perfectly free from odor, and a strong disinfectant, made from soap, paraffin oil, turpentine, borax, and essence of almonds. These ingredients treated in one particular way can be made into a thick block of solid and powerful cleansing cream, useful for all cleansing purposes. The particular method of treating the ingredients in order to make the cleansing cream is as follows: Put  $3\frac{1}{2}$  pails of water in a boiler, add 1 stone of soda, and let it boil ten minutes, till all the soda is melted, add  $\frac{3}{4}$  gills of turpentine, and stir briskly, cut up 16 lbs. of hard soap, and put in the boiler, and stir till dissolved, add  $2\frac{1}{2}$  gills of paraffin oil, very slowly, whipping briskly all the time, continue whipping and add 16 table-spoonfuls of borax, whip this in briskly till the mixture is cold enough to bear the hand in it. Now add  $2\frac{3}{4}$  gills more paraffin oil, and one teaspoonful of essence of almonds, and continue whipping briskly, till all the mixture has turned white, with a smooth, shiny surface; let it now stand till cold, the result is a large block of soft soap, as white as cream, but firm enough to be packed in wooden boxes.



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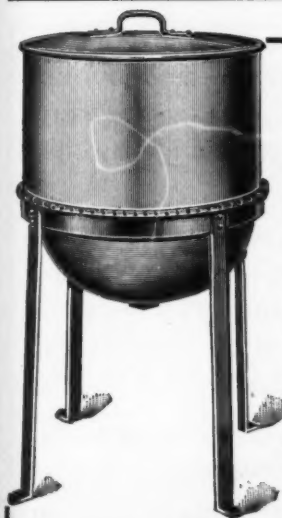
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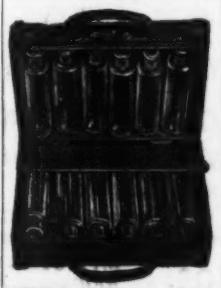
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